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ENVIRONMENTAL ASSESSMENT BOARD

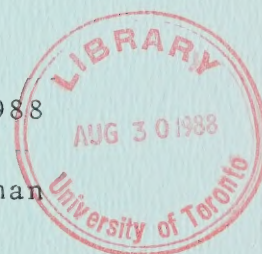
VOLUME: XXXV

DATE: Wednesday, August 17th, 1988

BEFORE: M.I. JEFFERY, Q.C., Chairman

E. MARTEL, Member

A. KOVEN, Member



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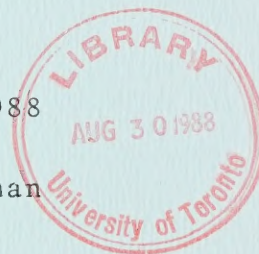


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HEARING ON THE PROPOSAL BY THE MINISTRY OF NATURAL
RESOURCES FOR A CLASS ENVIRONMENTAL ASSESSMENT FOR
TIMBER MANAGEMENT ON CROWN LANDS IN ONTARIO

IN THE MATTER of the Environmental
Assessment Act, R.S.O. 1980, c.140;

- and -

IN THE MATTER of the Class Environmental
Assessment for Timber Management on Crown
Lands in Ontario;

- and -

IN THE MATTER of an Order-in-Council
(O.C. 2449/87) authorizing the
Environmental Assessment Board to
administer a funding program, in
connection with the environmental
assessment hearing with respect to the
Timber Management Class
Environmental Assessment, and to
distribute funds to qualified
participants.

Hearing held at the Ramada Prince Arthur
Hotel, 17 North Cumberland St., Thunder
Bay, Ontario, on Wednesday, August 17th, 1988,
commencing at 9:30 a.m.

VOLUME XXXV

BEFORE:

MR. MICHAEL I. JEFFERY, Q.C.	Chairman
MR. ELIE MARTEL	Member
MRS. ANNE KOVEN	Member

A P P E A R A N C E S

MR. V. FREIDIN, Q.C.)	MINISTRY OF NATURAL
MS. C. BLASTORAH)	RESOURCES
MS. K. MURPHY)	
MR. B. CAMPBELL)	MINISTRY OF ENVIRONMENT
MS. J. SEABORN)	
MR. R. TUER, Q.C.)	ONTARIO FOREST INDUSTRY
MR. R. COSMAN)	ASSOCIATION and ONTARIO
MS. E. CRONK)	LUMBER MANUFACTURERS'
MR. P.R. CASSIDY)	ASSOCIATION
MR. J. WILLIAMS, Q.C.	ONTARIO FEDERATION OF
	ANGLERS & HUNTERS
MR. D. HUNTER	NISHNAWBE-ASKI NATION
	and WINDIGO TRIBAL COUNCIL
MR. J.F. CASTRILLI)	
MS. M. SWENARCHUK)	FORESTS FOR TOMORROW
MR. R. LINDGREN)	
MR. P. SANFORD)	KIMBERLY-CLARK OF CANADA
MS. L. NICHOLLS)	LIMITED and SPRUCE FALLS
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	LABOUR
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	LTD.
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MR. R. BARNES)	ASSOCIATION
MR. R. EDWARDS)	NORTHERN ONTARIO TOURIST
MR. B. McKERCHER)	OUTFITTERS ASSOCIATION
MR. L. GREENSPOON)	NORTHWATCH
MS. B. LLOYD)	

APPEARANCES: (Cont'd)

MR. J.W. ERICKSON, Q.C.) MR. B. BABCOCK)	RED LAKE-EAR FALLS JOINT MUNICIPAL COMMITTEE
MR. D. SCOTT) MR. J.S. TAYLOR)	NORTHWESTERN ONTARIO ASSOCIATED CHAMBERS OF COMMERCE
MR. J.W. HARBELL) MR. S.M. MAKUCH)	GREAT LAKES FOREST PRODUCTS
MR. J. EBBS	ONTARIO PROFESSIONAL FORESTERS ASSOCIATION
MR. D. KING	VENTURE TOURISM ASSOCIATION OF ONTARIO
MR. D. COLBORNE	GRAND COUNCIL TREATY #3
MR. R. REILLY	ONTARIO METIS & ABORIGINAL ASSOCIATION
MR. H. GRAHAM	CANADIAN INSTITUTE OF FORESTRY (CENTRAL ONTARIO SECTION)
MR. G.J. KINLIN	DEPARTMENT OF JUSTICE
MR. S.J. STEPINAC	MINISTRY OF NORTHERN DEVELOPMENT & MINES
MR. M. COATES	ONTARIO FORESTRY ASSOCIATION
MR. P. ODORIZZI	BEARDMORE-LAKE NIPIGON WATCHDOG SOCIETY
MR. R.L. AXFORD	CANADIAN ASSOCIATION OF SINGLE INDUSTRY TOWNS
MR. M.O. EDWARDS	FORT FRANCES CHAMBER OF COMMERCE
MR. P.D. McCUTCHEON	GEORGE NIXON

(iii)

APPEARANCES: (Cont'd)

MR. C. BRUNETTA

NORTHWESTERN ONTARIO
TOURISM ASSOCIATION

(iv)

I N D E X O F P R O C E E D I N G S

<u>Witness:</u>	<u>Page No.</u>
<u>JOHN EDWARD OSBORN,</u> <u>KENNETH A. ARMSON,</u> <u>DAVID GORDON,</u> <u>JOHN RANDOLPH CARY, Resumed</u>	5721
Continued Cross-Examination by Mr. Castrilli	5721

I N D E X O F E X H I B I T S

<u>Exhibit No.</u>	<u>Description</u>	<u>Page No.</u>
169	MNR document entitled: Survival and Growth Rates in Ontario, Division of Forests, December, 1974.	5723
170	Interrogatory Question No. 4 posed by CELA.	5740
171	Excerpt (Page 5) from MNR document entitled: A Manual for the Survey of Not Satisfactorily Regenerated Lands, 1980.	5749
172	Two-page excerpt from May, 1985 edition of Professional Forester from article by M.A. Chaudhry.	5760
173	Interrogatory Question No. 19 posed by CELA.	5835
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1 ---Upon commencing at 9:35 a.m.

2 THE CHAIRMAN: Thank you. Be seated,
3 please.

4 Mr. Castrilli?

5 MR. CASTRILLI: Thank you, Mr. Chairman.

6 Can you give me one moment while I make
7 friends with the microphone.

8

9 JOHN EDWARD OSBORN,
10 KENNETH A. ARMSON,
11 JOHN RANDOLPH CARY,
 DAVID GORDON, Resumed

12 CONTINUED CROSS-EXAMINATION BY MR. CASTRILLI:

13 Q. Mr. Gordon, I understand from your
14 testimony that summaries of second-year survival rates
15 began in 1981-82, and that you have characterized those
16 found in Document 23 to your evidence as acceptable; is
17 that correct?

18 MRS. KOVEN: What page number, Mr.
19 Castrilli?

20 MR. CASTRILLI: It would be page...

21 MR. GORDON: Page 212.

22 MR. CASTRILLI: Q. Document 23 is on
23 page 212 and the reference is on page 32 to paragraph
24 42.

25 MR. GORDON: A. That is correct. I have

1 characterized those results as being acceptable.

2 Q. Thank you. And I understand from
3 your testimony on August 9th that the unit forester or
4 the company forester, as the case may be, decides
5 whether an area's survival has been a success; is that
6 right?

7 A. That is correct.

8 Q. And I presume you mean that at the
9 management unit level?

10 A. That is correct.

11 Q. And would it be fair to say that that
12 is a discretionary decision with the particular
13 forester?

14 A. That is correct in that the
15 individual forester assesses the individual situation
16 that he or she is looking at and takes into account all
17 that is going on.

18 Q. Would you agree that while the
19 second-year survival rates may be acceptable, it is
20 important to know the amount of survival from the
21 second year to the fifth year?

22 A. I would agree with that, it is
23 important to know the level of survival from year zero
24 'til the time the stand is harvested.

25 Q. Would you agree with me that these

1 figures can drop from the second year to the fifth year
2 and that, if that is the case, the second-year figures
3 are less acceptable?

4 A. The possibility exists that for a
5 given stand the survival rate for that stand may
6 diminish over time; that is, with respect to the trees
7 that were planted.

8 MR. CASTRILLI: Mr. Chairman, I would
9 like to introduce the next exhibit with your
10 permission. (handed)

11 Q. Mr. Gordon, I am showing you a
12 Ministry of Natural Resources' document entitled:
13 Survival and Growth in Tree Plantations on Crown Lands
14 in Ontario, Division of Forests, December, 1974.

15 Do you now have a copy of that document?

16 MR. GORDON: A. Yes, I do.

17 Q. Can you confirm this is that
18 document?

19 A. That is correct.

20 MR. CASTRILLI: Mr. Chairman, I would ask
21 this be made the next exhibit.

22 THE CHAIRMAN: Exhibit 169.

23 ---EXHIBIT NO. 169: Ministry of Natural Resources'
24 document entitled: Survival and
25 Growth in Tree Plantations on
Crown Lands in Ontario, Division
of Forests, December, 1974.

1

2

3

4

5

6

MR. CASTRILLI: Q. Mr. Gordon, can you confirm for me that the report presents a survey of the survival and success rate of the plantations in Ontario up to the point of the -- sorry, would you like me to repeat that?

7

MR. GORDON: A. Yes, please.

8

9

10

11

Q. Can you confirm for me that the report which was prepared by the Ministry of Natural Resources in the early 1970s presents a survey of the survival and success rate of plantations in Ontario?

12

13

14

15

16

17

A. What it does based on a sample size that I can't determine - in other words, I don't know how many hectares were involved in the projects - it provides a summary of bareroot planting and tube planting for trees that were planted 1967, '66 and 1968; that is, two decades ago.

18

19

Q. I ask you to turn to the Appendix, pages 1 and 1A, about halfway through the report.

20

A. I have that page.

21

22

23

Q. Do you have that page? The heading reads, on page 1: Plantation Survival in Ontario, Crown Lands Nursery Stock.

24

A. That's correct.

25

Q. And the species that are involved

1 are: Black spruce, white spruce, white pine, jack
2 pine, and red pine; is that right?

3 A. That is correct.

4 Q. And the areas involved vary but --
5 well, with the exception of black spruce, they cover
6 northwest, northeast and southern Ontario; is that
7 right?

8 A. That is correct, the sample was
9 within those areas.

10 Q. And black spruce just deals with the
11 northwest and northeast portions of Ontario?

12 A. That is correct.

13 Q. Now, in particular, Appendix -- this
14 Appendix and pages 1 and 1A compare the differences
15 between the survival rates of the second and the fifth
16 years with respect to nursery stock; is that right, and
17 that is columns -- or what would be columns 4 and 5, if
18 we numbered the columns from left to right?

19 A. That is correct.

20 Q. Would you agree with me that for
21 every year there is a comparison, and we are speaking
22 now of the period 1966-1971 for each species, that for
23 every year there is a comparison between the second and
24 fifth year, the fifth-year survival rates are lower?

25 Do you want to take a moment to do that?

1 A. That is correct.

2 Q. I now refer you to pages 2 and 2A of
3 the same exhibit, again, in the Appendix just the next
4 two pages over.

5 A. I have them.

6 Q. And on this page we are looking at
7 Plantation Survival in Ontario Crown Lands for tubed
8 seedlings, and would you agree with me that with one
9 exception -- again, we are looking at black spruce,
10 white spruce, white pine and red pine and jack pine for
11 the periods 1966-1971, the areas vary, but all of them
12 include at least one portion of northern Ontario.

13 Would you agree with me that with one
14 exception; that is, for black spruce in 1967 in
15 northwest Ontario, that for every year there is a
16 comparison between the second and fifth year, the
17 fifth-year survival rates are lower?

18 A. That is correct.

19 Q. Can you advise the Board why the
20 Ministry of Natural Resources in Document 23 did not
21 record the survival rate for year five in light of the
22 experience such as that recorded in what is now Exhibit
23 169 with respect to lower survival rates in year five?

24 A. Based on our current thinking, we
25 feel that survival assessments are an indication of the

1 condition of the stand and the more important
2 assessment as to how a stand is doing is based on the
3 free to grow survey.

4 And so while as a unit manager it may
5 have been nice to have data relative to 50-year
6 survival, we have finite resources.

7 Q. So with those finite resources you
8 chose to rely or place greater emphasis on free to
9 grow; is that your evidence -- free to grow
10 assessments, I should say?

11 A. With our finite resources and
12 assuming that continues into the future, in general
13 terms, we will be placing more of those resources
14 towards free to grow assessment.

15 Q. Would it be reasonable to conclude,
16 Mr. Gordon, that had the Ministry of Natural Resources
17 reported on year five survival rates in Document 23,
18 the rates would have been lower than for year two,
19 based on Exhibit 169?

20 A. Based on my experience, it is
21 reasonable to make that assumption. As to whether or
22 not the degree of decrease would be as great as in the
23 MacKinnon report that we are looking at, I cannot
24 really comment on that.

25 But we must recognize that back when this

1 report was done that our tending practices and
2 abilities were somewhat limited and, in the 1980s, we
3 have more tools available, such as glycosate whereby we
4 can tend and hold back the competition and, therefore,
5 improve the potential for increased survival rates over
6 time.

7 Q. Sorry, Mr. Gordon --

8 A. And, as well, our site-preparation
9 practices have improved and that also has an effect on
10 the competition.

11 Q. You referred -- I wasn't sure, you
12 referred to a chemical?

13 A. That is correct.

14 Q. Sorry, could you perhaps repeat it, I
15 didn't quite hear what it was you said.

16 A. Glycosate, g-l-y -- excuse me.

17 THE CHAIRMAN: Mr. Gordon, that has got
18 another common name, doesn't it? We heard about it on
19 the site visit. I cannot remember what it was.

20 MR. GORDON: When I was in the field we
21 called it round-up and I believe nowadays they are
22 calling it vision.

23 THE CHAIRMAN: That is right.

24 MR. CASTRILLI: Q. It is an herbicide;
25 is that correct?

1 MR. GORDON: A. That is correct.

2 Q. Thank you.

3 A. And, as well, I think we should
4 recognize, for example, if you look at the normal yield
5 tables, if you look at, for example, site class 1 black
6 spruce, here is an indication that when you have a
7 fully stocked stand that, over time, there is a
8 decrease in the number of trees out there.

9 So it is not unreasonable to expect some
10 decrease in the number of trees that are surviving over
11 time. That is what naturally takes place in a stand in
12 the boreal forest.

13 Q. But, in any event, it is reasonable
14 to conclude if you had reported on year five survival
15 in the manner that Exhibit 169 did, the rates would be
16 lower than for year two?

17 A. In my judgment, they would tend to be
18 lower.

19 Q. Thank you.

20 A. Okay. And I think we should
21 recognize that when we are talking about survival
22 assessment we are only talking about how the trees that
23 we put pins beside are doing; we are not talking about
24 the trees that have come naturally onto that site
25 between the pins, and I think that is a very important

1 ...

2 Q. What do you know about those? Where
3 have you reported upon those in your Panel 4 evidence?

4 A. Mr. Armson has presented evidence in
5 the SOARS summary and, as well, the influence of those
6 stands -- those trees relative to free to grow would be
7 recognized and included in the results of the NSR
8 summaries.

9 And those trees would count towards
10 deciding whether or not the stand was free to grow. We
11 didn't specifically identify such trees.

12 Q. We will be getting to the SOARS study
13 in due course. Mr. Gordon, if --

14 MR. MARTEL: Can I ask a question then.
15 What percentage do you think, or have you done any
16 calculations to determine how much natural regeneration
17 would occur in these areas to increase the volume of
18 trees there -- or the number of trees, not volume?

19 MR. GORDON: I am not going to be able to
20 give you a direct answer. It is one of those answers
21 whereby it tends to be very site-specific.

22 So, for example, if you are looking at an
23 area that was jack pine originally and it was cut-over
24 and you go and plant some jack pine trees, the
25 potential exists, because of the jack pine cones on

1 that site, for a fair proportion of the trees that
2 develop on that site to be as a result of natural
3 seeding from those cones.

4 On other areas where perhaps you cut
5 poplar and you have planted white spruce or black
6 spruce, there is a high potential for poplar to come
7 back naturally on those sites. I can't give you an
8 exact number, it is very site-specific.

9 MR. MARTEL: But there has been no work
10 to try to quantify a percentage or anything like that?

11 MR. GORDON: The closest that comes to
12 that, as far as I understand, might be the information
13 that you gain by reviewing the SOARS. I don't know.

14 Mr. Armson, would you have any comments
15 on that?

16 MR. ARMSON: No. I would suggest that
17 throughout these three northern regions and on a
18 provincial and statistical basis, that is the only
19 numerical data that I am aware of.

20 There may be individual data at the unit
21 level and the unit foresters may have related new
22 inventories to past projects, but that would be at the
23 unit level only.

24 MR. CASTRILLI: Q. All right. Mr.
25 Gordon, just looking back at your exhibit -- sorry,

1 your paragraph 40 and Document 20, this is the five
2 management units that were chosen that have relatively
3 comprehensive records and by which summaries of
4 survival data -- second-year survival data were taken.

5 Can you advise the Board, was the area
6 that those five management units encompass of the 117
7 management units on Crown land in Ontario?

8 THE CHAIRMAN: Sorry, what was that
9 question again, please, Mr. Castrilli?

10 MR. CASTRILLI: Sorry.

11 Q. What is the percentage area that the
12 five management units chosen by the Ministry--

13 MR. GORDON: A. I don't have that number
14 available, but if the Board considers that number
15 important or you do, I can come back with that number
16 perhaps by tomorrow.

17 Q. Just a ballpark, I would be content
18 with that as well.

19 THE CHAIRMAN: Dr. Osborn, do you know?

20 DR. OSBORN: Yes. Mr. Chairman, the
21 obvious way to look at it is to look at page 196.
22 There is visual representation of those five units in
23 relation to the area of the undertaking. Just visually
24 you can see those five units in relation to the area of
25 the undertaking.

1 MR. CASTRILLI: Q. So if you were to
2 ocularize it, Dr. Osborn, how would you estimate?

3 DR. OSBORN: A. Five per cent, two per
4 cent.

5 Q. Two per cent. Thank you.

6 THE CHAIRMAN: What kind of word is that,
7 Mr. Castrilli?

8 MR. CASTRILLI: I thought I heard it
9 yesterday used by one of the witnesses, and I thought I
10 would try it out myself and see if I could say it
11 without tripping over it.

12 MR. CAMPBELL: It was Mr. Gordon's word.

13 THE CHAIRMAN: I think he just used
14 ocular, you put on the i-z-e.

15 MR. CASTRILLI: Q. Mr. Gordon, yesterday
16 we were speaking of the length of time unit foresters
17 remain on management units and the effect that this can
18 have on forest management generally and, more in
19 particular, at the time we were speaking of
20 regeneration assessment and related efforts.

21 Can I refer you to Exhibit 16, the
22 Baskerville Report, page 78 -- sorry, the third
23 paragraph on the page begins: "The current staff..."

24 Do you have that paragraph, Mr. Gordon?

25 MR. GORDON: A. That is correct.

1 Q. That paragraph reads -- I am just
2 going to read a portion of it:

3 "The current staff listing of the
4 Ministry of Natural Resources shows 197
5 professional foresters, of these 75 or 38
6 per cent are unit foresters assigned to
7 Crown units. There are 54 foresters with
8 one unit to manage; 18 with 2 units; and
9 3 with 3 units. Despite the doubling and
10 tripling, this leaves 18 of the 117 units
11 without a unit forester. The unit
12 foresters have, on average, been on their
13 present unit for 4.6 years with 52 per
14 cent of them serving in that capacity two
15 years or less, and 67 per cent serving
16 five years or less. This situation is
17 not conducive to the stability and
18 understanding of the local resource that
19 is essential to design an implementation
20 of good forest management."

21 The paragraph goes on. But just stopping
22 there, do you agree with that assessment by Dean
23 Baskerville, particularly the last sentence?

24 A. I don't think really I can comment on
25 that. I wasn't involved, nor do I know the basis of

1 these statistics.

2 I know Mr. Armson was involved in a
3 review of the role of the unit forester, and perhaps he
4 could better answer that question.

5 Q. Mr. Armson, did you pass a note to
6 Mr. Gordon?

7 MR. ARMSON: A. Yes.

8 Q. Do you want to read the note into the
9 record.

10 A. Yes, I would. I indicated -- I said:
11 If you would pass this to me, I dealt with this in my
12 1976 Report. I think that is a statement of fact.

13 Q. Well, all I want is an answer to the
14 question. You are the person to provide the answer to
15 whether you agree with Dean Baskerville or not?

16 A. Yes. And Dean Baskerville goes on to
17 note in that same paragraph that he believes - and I
18 would like to quote this for the record - that:

19 "Procedures for professional development
20 in the OMNR should be modified to permit
21 and encourage unit foresters to stay on
22 a single unit at least until the
23 management plan they design goes
24 through one period and an evaluation."

25 And in the current process that would, I

1 believe, be five years.

2 I indicated to the Board in my evidence
3 yesterday that in my report of 1976 I had used the
4 five-year period and the Board I think should know that
5 the Deputy Minister of the day, either in 1977 or late
6 '76 issued a statement, it was a direction to staff
7 that unit foresters would, in fact, stay on their units
8 for a period of five years. I don't have a copy of
9 that document.

10 But I would go on to comment that when
11 that came into play, it also had an unfortunate side
12 that unit foresters who had opportunities for career
13 development were then - and I believe there are a
14 number of examples of this - were then, in effect,
15 constrained from further development within the
16 Ministry in terms of their career and ultimately,
17 therefore, that particular direction was removed.

18 So that the continuity and the insurance
19 of stability by having a professional forester remain
20 in one area for five or perhaps more years, while
21 desirable in one sense, has a negative side in that
22 career development for particular individuals might --
23 could be precluded. I don't say it would be.

24 Q. Well, let's get back to the question
25 I asked which had nothing to do with the career

1 development and opportunities.

2 What is the situation with respect to the
3 paragraph and the sentence in particular I asked you
4 about on page 78? Dean Baskerville makes a very clear
5 statement:

6 "This situation is not conducive to
7 the stability and understanding of a
8 local resource."

9 He wasn't talking about the stability of
10 the unit forester:

11 "...the stability and the understanding
12 of a local resource that is essential to
13 design and implementation of good forest
14 management."

15 Do you agree with that statement, yes or
16 no?

17 A. Yes.

18 Q. Thank you. While we are on Exhibit
19 16, Mr. Gordon, yesterday we were speaking of
20 information problems arising from some of the
21 Ministry's responses to my client's interrogatories on
22 regeneration and other issues.

23 Can I refer you to page 74 of Exhibit 16.
24 The first paragraph under the heading of Information
25 Problems.

1 MR. GORDON: A. I have it.

2 Q. Dean Baskerville notes:

3 "There are substantial problems in the

4 Ministry with respect to handling

5 information. In every case where

6 information was sought by the audit..."

7 I presume Dean Baskerville was there

8 referring to his own audit:

9 "...it was in existence, but the number

10 of times when it was not retrievable in a

11 usable form was alarming. It is

12 exceedingly difficult to get clear data

13 on many forest and timber management

14 matters."

15 Do you agree with that assessment, Mr.

16 Gordon?

17 A. Yes.

18 Q. And moving on to page 75, the same

19 exhibit. It is the last paragraph on the page

20 beginning:

21 "The existing information systems appear

22 to have been constructed with a view to

23 supporting requests for budget rather

24 than to evaluating effectiveness of

25 management of the resource as it occurs

1 in the forest."

2 Do you agree with that assessment, Mr.
3 Gordon?

4 A. I don't think it is as black and
5 white as Mr. Baskerville paints it, but I would tend to
6 agree.

7 Q. Thank you.

8 A. And that is one of the reasons, for
9 example, we have the new Timber Management Planning
10 Manual whereby recordkeeping becomes more important and
11 we are producing annual reports, and the five-year
12 summary of what has happened on a management unit will
13 be summarized and included in the following management
14 plan.

15 Q. Was the 1986 Timber Management
16 Planning Manual available to Dean Baskerville at the
17 time he wrote his report -- or issued his report?

18 A. Yes, it was. And I don't know as to
19 what detail he reviewed that manual.

20 Q. That is fine, thank you.

21 Now, moving on in your evidence, Mr.
22 Gordon -- I suppose the easiest way to do this would be
23 to refer you to the next interrogatory. Question 14
24 from the interrogatories of my client.

25 You are familiar with that?

1 A. Yes.

2 THE CHAIRMAN: Exhibit 170.

3 ---EXHIBIT NO. 170: Interrogatory Question No. 4 posed
4 by CELA.

5 MR. CASTRILLI: Q. Mr. Gordon, you can
6 take a moment to read or reread your answer. You were
7 referring on that page -- you were referring on that
8 page to your paragraph 44 respecting NSR surveys that
9 are carried out during the preparation of an FMA and
10 you use the term, in the last sentence:

11 "The surveys also determine the FMA
12 holder's obligation to treat areas which
13 are not free to grow at the time of the
14 survey but are deemed to be economically
15 treatable within the time period covered
16 by the FMA..."

17 And you note:

18 "...i.e., NSR classes 2 and 3."

19 We asked you in our interrogatory to
20 define what you meant by economically treatable and
21 then you referred to page 5 of the document entitled:
22 A Manual for the Survey of Not Satisfactorily
23 Regenerated Areas. which I don't believe is in evidence
24 but I will be raising momentarily.

25 The rest part of your answer was:

1 "As per page 5 of the attached document
2 which is entitled: A Manual for the
3 Survey of Not Satisfactorily Regenerated
4 Lands, NSR class 2 lands are
5 those which are satisfactorily stocked
6 but require tending treatments. NSR
7 class 3 lands are those areas which can
8 be treated at current unit cost levels
9 and within the context of these surveys
10 such areas which can be treated at
11 current unit cost levels are considered
12 to be economically treatable."

13 Now, you did write that answer; is that
14 right?

15 MR. GORDON: A. That's correct.

16 Q. Could you advise the Board what the
17 range of unit costs are for doing projects?

18 A. Significant.

19 Q. That's not quite a range. Do you
20 have a range you could provide the Board to provide it
21 with some guidance?

22 A. We have so many different project
23 types, whether we are talking about planting containers
24 versus bare root versus site preparation with barrels
25 with teeth versus aerial seeding which is \$7 a hectare

1 for less, versus planting trees which is \$200 a
2 thousand. What are you looking for, Mr. Castrilli?

3 Q. Well, I wanted a range. If you were
4 treating the most expensive areas in a given year,
5 would that be the current unit cost?

6 A. If you were treating the most
7 expensive areas in a given year and you look
8 specifically at those costs in that year, then those
9 are the current costs.

10 Q. They are. Are there generally
11 standards or methods within the Ministry of Natural
12 Resources used to determine economically treatable or
13 economic treatability?

14 A. As a unit manager, you would review
15 past practices looking at the results achieved and
16 determine whether or not, in your estimation, it was
17 worthwhile spending those amounts of dollars to
18 continue treating such sites.

19 Q. That sounds like a method. Is that
20 also -- are there any standards?

21 A. What do you mean by a standard?

22 Q. Is it written down anywhere, given
23 the perambulations of the various possibilities, is it
24 not written down somewhere, or is it really negotiated
25 between the FMA holder and the MNR unit forester?

1 A. The way it works is the
2 representative of the prospective FMA holder and the
3 unit forester representing the Ministry of Natural
4 Resources in that location will review past practices
5 for a number of years, and it is not written down
6 specifically that they look at one year's past
7 practices or seven.

8 They use good judgment and they go back
9 and look at a variety of treatments and, by doing this,
10 the representative of the FMA holder becomes acquainted
11 with past treatments directly, as well, is made aware
12 of the costs of such treatments.

13 Those two individuals can then come to
14 agreement as to what are economically treatable sites
15 following harvesting and they use that knowledge that
16 they have gained in this review to determine whether or
17 not areas that are not free to grow in the NSR survey
18 can be treated economically.

19 Q. So the answer to my question is: It
20 is not negotiated between the FMA holder and the unit
21 forester; is that correct?

22 A. I wouldn't say it that way. If you
23 were inferring that -- if it is a little bit more than
24 being easy to treat a site, therefore, it is considered
25 not economically treatable and, therefore, the FMA

1 holder may not be obliged to treat such things, that is
2 incorrect.

3 Q. You just said a moment ago, those two
4 come to an agreement. Is it not obvious that they are
5 negotiating what in fact will become economically
6 treatable and isn't that what you are telling the
7 Board?

8 A. What I mean by agreement is that they
9 come to an understanding as to what is economically
10 treatable based on past practices.

11 THE CHAIRMAN: Well, I think we are
12 dealing with semantics here. I mean, basically it is a
13 negotiating process out of which pops at the other end
14 some understanding.

15 MR. CASTRILLI: I agree we are.

16 Q. Now, while we are on the subject of
17 the NSR, can you confirm for me that NSR categories 4
18 and 5 are for areas that can only be regenerated at
19 greater than normal costs and areas that cannot be
20 regenerated under present technology?

21 A. One or the other or a combination of
22 both.

23 Q. So the answer is yes?

24 A. One or the other or a combination of
25 both.

1 Q. Can you confirm for that these two
2 categories represent 19 per cent of the total NSR?

3 A. If you look at Document 26 on page
4 220, for the area that was surveyed for the FMAs
5 involved, that would be a correct deduction. And that
6 on the graph the NSR 4 area is 4 per cent and the NSR 5
7 area is 15 per cent, adding up to 19 per cent.

8 MR. CASTRILLI: Mr. Chairman, I believe
9 that page 220 was one of the pages that was amended by
10 the Ministry and, I presume, the Board has the amended
11 version.

12 Q. Mr. Gordon, in your -- perhaps I
13 should ask you firstly. We asked you in one of our
14 interrogatories:

15 "What proportion of NSR 4 and 5 is a
16 result of past harvesting?"

17 And your answer was:

18 "We cannot provide this information as it
19 was not collected during the surveys."

20 Is that correct?

21 MR. GORDON: A. That is correct.

22 Q. Can you confirm for me that past
23 harvesting created some portion of the NSR 4 and 5
24 categories?

25 A. It created some proportion, that is

1 correct.

2 Q. Would you agree with me what whatever
3 portion of NSR 4 and 5 that came from harvesting would
4 indicate poor pre-planting of the harvest or deliberate
5 cutting of areas that will not regenerate?

6 A. That is an incorrect assumption.

7 Q. What assumption should the Board
8 draw, considering the classification those lands end up
9 in?

10 A. I believe what we have to recognize
11 is those areas are recognized as NR 4 and 5 at the time
12 of the survey and, as we recognize, there are all sorts
13 of things that take place after the survey takes place;
14 that is, tree continues to grow, new trees begin to
15 appear on the site.

16 And so there is no question that some of
17 those hectares that were included the categories NSR 4
18 and 5, some of those hectares would be potentially free
19 to grow.

20 MR. MARTEL: Can I ask a question?

21 MR. CASTRILLI: Yes.

22 MR. MARTEL: Can you describe for the
23 Board what type of practices created the not
24 satisfactorily regenerated and what safeguards have
25 been built in to ensure that that can't occur again?

1 MR. GORDON: Through the planning
2 process. First of all, we must make reference to your
3 silvicultural guidelines which give some direction and
4 are being currently updated. And, No. 2, you are
5 required to develop ground rules that describe the
6 treatment options, the harvesting options relative to
7 different working groups or forest units.

8 I think I should try and make it clear
9 that because it says NSR 4 or 5 that doesn't mean that
10 there is not a forest there.

11 MR. MARTEL: I understand that. I am
12 just curious as to what kind of practices, which were
13 referred to by Mr. Castrilli occurred that didn't --
14 let me go back.

15 I think you said that some of the sites
16 were created by harvesting. And I am just curious to
17 know what those were and what type of safeguards are in
18 place so it doesn't occur again, or is it impossible to
19 overcome those situations?

20 MR. ARMSON: I wonder if I could speak to
21 it in a very specific example in my own experience.

22 For example, in the first forest
23 management agreement, I was involved with the NSR
24 survey at that time and one of the areas that would
25 fall into this category 5 - and I think there is a

1 brief description - there was some areas that had been
2 cut-over, oh, 20 maybe even 30 years before 1979 when
3 the survey was undertaken, they were in the areas of
4 winter cut, winter roads.

5 And currently it was basically not
6 possible, but the cost of constructing an all-weather
7 road just to access that area was considered too high a
8 cost. As Mr. Gordon says, there was vegetation there.
9 And that was one of the areas that was not feasible to
10 treat, in that case, because of a simple accessing, it
11 was a major one, actually it was in the days when they
12 booned logs across Lake Abitibi and it was totally
13 really out of the picture for access.

14 That is just one example, Mr. Martel.

15 MR. CASTRILLI: Q. Mr. Gordon, while we
16 are on the subject of NSR 4 and 5, can I refer you to
17 page 216 of your evidence. What you have here is a
18 summary description of the various NSR categories; is
19 that right?

20 MR. GORDON: A. That's correct.

21 Q. Actually it goes onto page 217. Can
22 you confirm for me that there is no reference under
23 headings 4 and 5 to harvesting as a source or a reason
24 an area may have become NSR 4 and 5?

25 A. That is correct.

1 Q. And actually there are a set of NSR
2 manuals -- there is an NSR manual; is that correct?
3 and it has not actually been filed by the Ministry to
4 this point in time; has it?

5 A. I am not aware if it has been filed
6 or has not been filed.

7 Q. Well, why don't I just file one page
8 of it. Mr. Gordon, I am showing you what is page 5 of
9 the manual entitled: A Manual for the Survey of Not
10 Satisfactorily Regenerated Lands by the Ministry of
11 Natural Resources, 1980.

12 Are you familiar with that page?

13 A. Yes.

14 Q. And you will note that I have just
15 included the first five categories and not the sixth
16 which appears on the next page.

17 I am just going to be asking you the
18 questions about the five.

19 MR. CASTRILLI: Mr. Chairman, I ask that
20 this be made the next exhibit.

21 THE CHAIRMAN: Exhibit 171.

22 ---EXHIBIT NO. 171: Excerpt (Page 5) from MNR
23 Document entitled: A Manual for
24 the Survey of Not Satisfactorily
Regenerated Lands, 1980.

25 MR. CASTRILLI: Q. Mr. Gordon, if you

1 will take a moment, if you haven't already, to read the
2 definitions of NSR 4 and 5 that appear on page 5 of
3 what is now Exhibit 171.

4 Would you confirm for me that the
5 definitions make it clear that NSR 4 and 5 can come
6 from cutting and, for example, on difficult terrain,
7 wetness and/or access problems -- from access problems?

8 A. That is correct and as I agreed
9 earlier NSR 4 and 5 can be areas that were previously
10 harvested.

11 Q. On particular areas such as areas
12 with difficult terrain or wetness problems, for
13 example; is that right?

14 A. That is correct.

15 Q. Thank you.

16 MR. CASTRILLI: Mr. Chairman, your
17 indulgence for one moment.

18 Q. Mr. Gordon, continuing with the issue
19 of NSR 4 and 5, would you agree that to the extent
20 these areas become NSR 4 and 5 as a result of
21 harvesting, that it would make sense not to harvest
22 them if it costs more to regenerate these areas or if
23 they cannot be properly regenerated?

24 MR. GORDON: A. I am not sure what you
25 mean by properly regenerated, but I disagree in general

1 with your thesis.

2 Q. You do. Would you agree with me that
3 some of these areas could be protection forest areas or
4 site class 4 areas?

5 A. I have no knowledge or data to say
6 that they are or are not, but the possibility exists
7 that there is a hectare included in the survey that
8 is in those classes.

9 Q. A hectare?

10 A. Or more.

11 Q. Would these areas also be -- or could
12 these areas also be upland and mixed hardwood areas?

13 A. They could be.

14 Q. Mr. Gordon, in general, can you
15 confirm for me that the introduction of the FMAs also
16 coincided with the introduction of the concept of free
17 to grow?

18 A. I believe that is correct, but the
19 better person to confirm that would be Mr. Armson.

20 Q. I would be content to have Mr. Armson
21 answer that question.

22 MR. ARMSON: A. I first became aware of
23 the term free to grow - not as exactly as defined
24 here - when Professor Day who was a colleague of mine
25 at the University of Toronto and he and I were

1 conducting studies in what was then Englehart
2 Management Unit and this would be in the late 1960s,
3 and he was undertaking studies on the effects of
4 various herbicides on release and subsequent growth.

5 And he had the problem in the
6 nomenclature in the study to have a label, if you will,
7 for tree, the planted or the regenerated species in -
8 in this case we were always dealing with conifers - how
9 to label whether they were "free from competition" and
10 had a certain amount of growth and the first time I
11 heard it, we were sitting around he said: Well, they
12 are "free to grow."

13 That was the term, that was when I first
14 became aware of it. I believe subsequently in the
15 pacific northwest foresters had also quite
16 independently used the term.

17 And it was decided in the following the
18 negotiations and discussions that brought about the
19 forest management agreements, it became necessary to in
20 fact create a manual. That was the manual that's
21 already been described and, at that time - and Dr.
22 Osborn was a co-author of that - it was decided to use
23 the term and to give it a very strict objective
24 definition in terms of both growth, freedom from
25 competition.

1 And that was the origin of the term and
2 it was introduced, I would say, in an operational sense
3 then into the Ministry via the FMAs as of 1980.

4 Q. So the answer to my question is yes?

5 A. Yes.

6 Q. Would you agree with me, Mr. Gordon,
7 that because of the time required to determine whether
8 a stand has become free to grow, sometimes up to 12
9 years, that this delays the reporting of the results of
10 regeneration work?

11 MR. GORDON: A. In the year that the
12 treatment is carried out we report how many hectares
13 were treated. As to when we can assess the
14 effectiveness of that work, in that respect, there is a
15 time lag relative to the free to grow period.

16 Q. So the answer to my question is yes?

17 A. My answer is what I have just given
18 you.

19 Q. Well, it is not quite clear to me
20 what the answer is. I have asked you a very specific
21 question that can be answered in a yes or no.

22 Can you answer yes or no to that
23 question?

24 A. Can you repeat the question, please?

25 Q. I certainly can. Would you agree

1 with me because of the time required to determine
2 whether a stand has become free to grow, for example,
3 up to 12 years, this delays the results of reporting
4 regeneration success?

5 A. Yes.

6 Q. Thank you. Would you also agree with
7 me, Mr. Gordon, that the new classification system;
8 that is, free to grow, does not have a clear definition
9 of whether a plantation is a failure or not?

10 A. There is no specific words that say
11 whether or not a plantation is a failure or not, but by
12 very simple interpretation one can assume that at that
13 point in time when the free to grow assessment is done,
14 if it does not meet the minimum standards, for example,
15 a minimum stocking standard of 40 per cent, one can
16 assume at that point in time that that can be equated
17 to a failure relative to those standards.

18 Q. Would you look at Exhibits 166 and
19 167, Mr. Gordon. These are the stocking standards from
20 1971 and 1978.

21 A. I have them.

22 Q. You have them. You will see on both
23 of those exhibits on the very first page there is a
24 definition of what would constitute a failure; is that
25 right?

1 A. That is correct.

2 Q. And will you confirm for me that
3 there is no comparable definition of failure or any
4 definition of failure at all in words in what I guess
5 is your Document 17 which commences at page 176?

6 A. That is correct.

7 Q. Thank you.

8 A. And perhaps that's in part because we
9 have gone a little further in our thinking. If we look
10 a little closer at the definition of failure, in 1971
11 it doesn't recognize, to any degree, that a stand
12 conditions change over time.

13 If you look at the definition of failure,
14 in 1978, it is finally recognized that an area which
15 may be a failure "at that point in time when the
16 assessment is done" may be re-assessed after further
17 time, as it says, further time in the definition of
18 failure in 1978.

19 So, therefore, they are recognizing that
20 over time an area classified as being a failure, using
21 these standards, may in actual fact move from the
22 failure class to a higher class.

23 Q. Well, we'll get to -- sorry.

24 A. And, therefore, the classification
25 -- the term failure is very misleading.

1 Q. I suggest to you the term free to
2 grow is also misleading, but we will come to that in a
3 moment.

4 Just so I understand what free to grow is
5 about, can you confirm for me that instead of now
6 calling something a failure as you could have under
7 Exhibits 166 and 167, the area is kept out of the land
8 base for calculating the MAD until it becomes free to
9 grow; is that right?

10 A. That is correct.

11 Q. Thank you. Now, you have emphasized
12 the funding constraints that limited regeneration
13 surveys you have noted that, for example, in your
14 paragraph 40.

15 Would you agree that considering the
16 Forest Production Policy and the simulations which we
17 will be coming to later, would you agree with me that
18 more stress should have been placed on obtaining
19 information on the development of plantations in
20 natural growth stands?

21 A. Yes.

22 Q. Would you also agree with me that the
23 reporting of plantations' survival is highly selective
24 and that only five units are presented in the
25 Ministry's evidence?

1 A. It is highly selective in that we
2 selected only five units. If that is what you mean
3 then I agree.

4 Q. Thank you. Would you also agree that
5 the provincial summaries are selective for the year
6 assessed; i.e., year jtwo as set out in paragraph 42 of
7 your evidence?

8 A. After 1981 when the provincial
9 summaries came into place, the standard time at which
10 you would do a second-year survival was second year,
11 although there were some survival surveys done at six
12 months, one month or whatever.

13 And so, therefore, on a provincial basis,
14 the only data that we have that could be summarized
15 provincially related to second year and that is why we
16 only presented second-year survival results.

17 Q. Well, Mr. Gordon, with great respect,
18 in the paragraph dealing with management units aren't
19 you also reporting on second-year data only, the five
20 management units?

21 A. That is correct.

22 Q. And doesn't the range of years for
23 those five management units for which you collected
24 second-year data span the period 1955-1984
25 collectively? Would you like to take a look at

1 Document 21 to confirm that.

2 A. That is correct.

3 Q. Thank you. So why couldn't you have
4 reported on five-year survival for the five management
5 units?

6 A. We could have, but in our estimation
7 the number of five-year survival assessments carried
8 out would have been that much less than second-year
9 survival.

10 Q. Don't you mean the success rate would
11 have been that much less?

12 A. No.

13 Q. So your testimony: It would have
14 been more considering what is now Exhibit 169?

15 A. No. I understood your question to
16 mean that the reason we did not choose to present
17 fifth-year survival data from the five management units
18 was that I anticipated that those survival results
19 would be lower.

20 My answer in that context was no.

21 Q. Okay. So you didn't deliberately do
22 that, but would you agree with me that given the range
23 of years you had available on those five management
24 units; i.e., a range from 1955-1984, you could have
25 certainly reported on five-year survival rates?

1 Yes or no?

2 A. Yes, we could have reported on the
3 five-year survival rates that were available.

4 Q. Thank you. Would you also agree with
5 me that the provincial summaries are selective for the
6 years -- excuse me, for the time period; i.e.,
7 1981-1987?

8 A. That is correct.

9 Q. Thank you. Would you agree with me
10 in general, Mr. Gordon, that if the Ministry of Natural
11 Resources wanted to present a truer picture of
12 artificial regeneration work performed, it could have
13 presented the success rate of their plantation over the
14 years -- or their plantations over the years and
15 indicated the changing standards that were used for the
16 different time periods?

17 A. Could you repeat that, please?

18 Q. Yes. Would a truer picture of the
19 artificial regeneration work performed be provided if
20 you had presented the success rate of plantations over
21 the years and indicated the changing standards that
22 were used for the different time periods?

23 A. Do you mean by that question that if
24 we had presented more data and compared that data for a
25 given year to the standards that were in place at that

1 time, the Board would have a better indication as to
2 how our treatments were doing relative to the standards
3 at that time?

4 Q. Yes.

5 A. Yes.

6 Q. Thank you. Mr. Gordon, I am now
7 showing you an article which appears in the May, 1985
8 edition of the Professional Forester, and I am again
9 showing you an excerpt from that entire edition. The
10 entirety of the article is by Mr. M.A. Chaudhry.

11 I believe you have been given notice of
12 that; am I right?

13 A. That is correct.

14 MR. CASTRILLI: Mr. Chairman, I ask that
15 this be made the next exhibit.

16 THE CHAIRMAN: Exhibit 172.

17 ---EXHIBIT NO. 172: Two-page excerpt from May, 1985
18 edition of Professional Forester,
article written by M.A. Chaudhry.

19 MR. CASTRILLI: Q. Mr. Gordon, this
20 exhibit is an excerpt from the entirety of that
21 Newsletter and we will skip the President's Message
22 and go to what would be page 2 of the document.

23 MR. GORDON: A. I have that.

24 Q. By the way, the Professional Forester
25 is a Newsletter produced by the Ontario Professional

1 Forestry Association; is that right?

2 A. That is correct. And we are looking
3 at the section called Opinions?

4 Q. Yes, that is right. Now, I
5 understand that Mr. Chaudhry is currently a member of
6 Mr. Osborn's FRI unit; is that right, Mr. Osborn?

7 DR. OSBORN: A. That is correct, with
8 one proviso. As of June this year, Mr. Chaudhry is now
9 on long-term income protection, which means officially
10 he is not being paid by MNR, but up until June of this
11 year Mr. Chaudhry worked for me for the last three
12 years.

13 Q. Thank you. And, Dr. Osborn, can you
14 confirm for me that Mr. Chaudhry was formally the
15 Ministry of Natural Resources' Regeneration Assessment
16 Specialist?

17 A. Prior to working for the FRI, yes,
18 Mr. Chaudhry worked in that capacity.

19 Q. Thank you. Mr. Gordon, I would ask
20 you to begin by turning -- or directing your attention
21 to the bottom of the first page, the last paragraph on
22 the right-hand column beginning:

23 "The major emphasis..."

24 Do you see that?

25 MR. GORDON: A. I have that.

1 Q. Mr. Chaudhry writes:

2 "The major emphasis is placed on the
3 number of acres treated rather than the
4 number of acres treated successfully.

5 There is no tradition of a systematic
6 follow-up after planting or seeding in
7 Ontario."

8 Would you agree with that assessment of
9 the Ministry's program?

10 A. I can perhaps understand why Mr.
11 Chaudhry has said that. I would agree insofar as the
12 field level funds have not been available to monitor as
13 to whether or not the treated hectares are turning into
14 successfully treated hectares.

15 Q. He continues in that paragraph, the
16 sentence reading:

17 "There are no traditions..."

18 Do you see that on what would now be the
19 last page of the exhibit?

20 A. There is no tradition of a systematic
21 follow-up, is that what we are talking about?

22 Q. No, we are not quite there yet.

23 "There are no traditions of continuously
24 monitoring treated areas."

25 Do you see that? We are on the second --

1 the last page, the left-hand column at the top. I can
2 point it out.

3 A. Okay, I have it.

4 Q. Do you have it? Mr. Chaudhry writes:

5 "There are no traditions of continuously
6 monitoring treated areas for further
7 treatment until they are free to grow."

8 Do you agree with that assessment?

9 A. To be very honest, I really don't
10 know what Mr. Chaudhry meant by traditions and, as
11 well, what his definition would be of continuously
12 monitoring. Would that mean going out there every six
13 months or every two years?

14 Q. Well, Mr. Gordon, if you read the
15 rest of the paragraph, I think Mr. Chaudhry indicates
16 what he means.

17 Should I read that into the record, or do
18 you want to answer the question in light of your
19 understanding of what he is indicating in the rest of
20 that paragraph?

21 A. If that is what he means by
22 tradition, then I can't agree that that tradition is
23 necessary.

24 Q. So you disagree that an amount of
25 follow-up is necessary in order to determine success;

1 is that correct?

2 A. What Mr. Chaudhry has said is that
3 there is no tradition of continuously monitoring treated
4 areas, and I assume he means all treated areas, and we
5 should be visiting such areas twice during the first
6 year and at least once during every year after that on
7 the areas free to grow, and I disagree with that.

8 Q. The next paragraph:

9 "There is a denial by top decision-makers
10 that regeneration success in conifers is
11 far from meeting the desired stocking
12 standards. To the contrary, it is ironic
13 that the failure of regeneration projects
14 is attributed to the weaknesses in the
15 regeneration assessment criteria rather
16 than to the poor silvicultural practices.
17 No wonder the status quo is being
18 perpetuated. Before rectifying a problem
19 it is necessary to accept that a problem
20 exists."

21 Do you agree with that assessment, Mr.

22 Gordon?

23 A. Because of my place within the
24 Ministry of Natural Resources, I cannot comment on what
25 the top decision-makers are denying or not denying.

1 However - and you may wish to ask Mr.
2 Armson for his interpretation - I believe we have
3 stated that, for example, the SOARS results show that
4 while we are obtaining regeneration success in that
5 there is a forest coming back most of those hectares
6 surveyed, relative to the silvicultural treatments that
7 were carried out on those sites initially, we were
8 silviculturally ineffective.

9 Q. We will be coming to that. Mr.
10 Armson, did you wish to indicate your agreement or
11 disagreement with that paragraph?

12 MR. ARMSON: A. It is unclear to me who
13 Dr. or Mr. Chaudhry is referring to by top
14 decision-makers. I presume that in 1984 I might have
15 been included when the SOARS study was initiated. That
16 was a year before Mr. Chaudhry wrote the letter.

17 Q. The next paragraph: "The
18 Ministry's -- Mr. Chaudhry writes:

19 "The Ministry's main office, which should
20 be a tower of light, assuming they meet
21 a major leadership role in setting
22 directions, disseminating information,
23 providing expertise and evaluating
24 success of the silviculture program is
25 playing a passive role. There seems to

1 be hardly any concern about silviculture
2 or regeneration success."

3 Do you agree with that assessment, Mr.
4 Gordon?

5 MR. GORDON: A. No.

6 Q. In what respects is it inaccurate?

7 A. For example, in my estimation and in
8 1980 we had a major change in how we carried out timber
9 management in various parts of the province and we
10 moved towards forest management agreements.

11 And that, in part, recognized that we
12 had, in some locations, not had been as successful as
13 we had wished and there were advantages in having the
14 company not only do the harvesting but also carry out
15 the silvicultural.

16 So, in that respect, main office - I
17 believe as it is termed here - recognized a problem and
18 a change took place.

19 Q. So your comment is the tying of
20 harvesting and regeneration work to the same party is
21 the best answer to Mr. Chaudhry's comment; is that your
22 answer?

23 A. That is part of my answer. And, as
24 well, in my contacts with any of the people who were
25 working in main office at that time, I did not detect

1 what Mr. Chaudhry detected, that they were not
2 concerned about the silvicultural practices that were
3 taking place in the field. For example, when I had
4 contact with Mr. Armson, he was very concerned.

5 Q. The remainder of that paragraph, Mr.
6 Gordon, Mr. Chaudhry goes on to note the degree of
7 concern expressed by senior management was reflected in
8 their decision to do away with the position
9 regeneration assessment specialist.

10 THE CHAIRMAN: That was his position, was
11 it not?

12 MR. CASTRILLI: Q. And that was his
13 position. Now, did they not just do away with -- I was
14 going to say did they do away with Mr. -- I won't say
15 did they do away with Mr. Chaudhry.

16 Would you agree there is now no position
17 of regeneration assessment specialist?

18 MR. GORDON: A. It is my understanding
19 that there is no position with that exact title, but we
20 recently hired full-time someone who will have similar
21 responsibilities to what Mr. Chaudhry had. I believe
22 his title is - and I can confirm this - his title is
23 the Silvicultural Informations System Co-ordinator,
24 which deals, to some extent, with how we assess
25 regeneration.

1 And that person was hired within the past
2 year and, previously, we had succeded an individual to
3 that position for I believe up to two years.

4 Q. Can you identify these individuals?

5 A. The individual succeded to this
6 position is the same Patrick Corbett who actually went
7 out and looked at the five units' records and the
8 individual who is now full-time in that position is a
9 Mr. Larry Skinkle, S-k-i-n-k-l-e.

10 Q. Will either of these individuals be
11 testifying in this hearing?

12 MR. FREIDIN: I cannot advise you at the
13 present time.

14 MR. CASTRILLI: If they were, can I
15 presume it will be the regeneration panel?

16 MR. FREIDIN: No. I haven't made any
17 decision as to whether those individuals would be
18 witnesses, or the panel in which they may appear.

19 You will be advised of that when we
20 provide you with the notice of the witness statements
21 in the manner that's been prescribed by the Board.

22 MR. CASTRILLI: That's fine.

23 Q. Let's move on in what is now Exhibit
24 172. Mr. Chaudhry notes in the same paragraph I began
25 with a moment ago:

1 "We know nothing about the success rate
2 of regeneration of forest management
3 areas to this point in time."

4 Do you see that sentence in the same
5 paragraph.

6 MR. GORDON: Yes, I have it.

7 Q. Do you agree with that assessment?

8 A. No.

9 Q. What do we have that tells us about
10 the success rate of regeneration on FMA lands?

11 A. What we have is knowledge gained by
12 the local DCR.

13 Q. Excuse me. A DCR, is that like...?

14 A. A designated Crown representative.

15 Q. I see.

16 A. It is equivalent of the unit forester
17 but on an FMA. We have that individual working closely
18 with the FMA holder and that individual, because of
19 that individual visiting the forest, is aware of what
20 treatments are taking place and, in a general sense,
21 not a formal sense, is aware of the effectiveness of
22 the treatments.

23 MR. MARTEL: Can I ask a question?

24 MR. CASTRILLI: Yes.

25 MR. MARTEL: I think yesterday at one

1 point I made an inquiry as to a similar question to
2 what is being raised now with respect to Head Office
3 knowing what is going on in the field.

4 Late yesterday afternoon I asked that
5 question of Mr. Armson and his cohort.

6 Again, is it a similar problem here, that
7 Head Office assumes that, in fact, there is no
8 documentation to support -- you have an individual out
9 there who is doing some work, FMA-by-FMA, but are those
10 results tabulated so that Head Office can get an
11 understanding and the knowledge of what in fact is
12 occurring?

13 MR. CARY: As I mentioned yesterday
14 afternoon, Mr. Martel, there is an audit process, there
15 is a management planning process. The main office
16 management planning section is aware of the management
17 planning and the progress being made and it's reported
18 on an annual basis and on a five-year basis.

19 And we will have a system in place that
20 will look at the management units, management
21 unit-by-management unit and are able to judge.

22 MR. MARTEL: You say we will be looking
23 at it.

24 MR. CARY: We are, we are.

25 MR. MARTEL: All right.

1 MR. CARY: The new timber management
2 planning system is in place, it has only been in place
3 for two years. So it is in its early days but we are
4 retaining that information and I would submit that we
5 are now starting to keep comprehensive information
6 about how the forest is doing out there.

7 MR. ARMSON: If I might add, Mr.
8 Chairman, one brief comment.

9 In addition to the records that either
10 are or should be kept, I think the Board should be
11 clear that there are decisions that must be made as
12 part of the responsibilities of professional foresters
13 in the field. They may be based on visual
14 observations, they may be based on any number of, if
15 you like, means that may not necessarily lend
16 themselves to complete documentation.

17 Those are the professional
18 responsibilities. There must be an accountability and
19 I bring this up because I chaired this committee on
20 unit forester's responsibilities, accountability and
21 authority and that was something that came through very
22 clearly from the unit foresters themselves, that there
23 is a documentation that is and should be required, no
24 question about that.

25 But these are professionals who have to

1 makes decisions, and they must have that flexibility to
2 do that and be held accountable for those decisions,
3 yes. But to hamstring them, in a sense, with a rigid
4 documentation for the purposes of only documentation in
5 itself, is not really very productive.

6 That is the comment, Mr. Martel.

7 MR. CASTRILLI: Q. Mr. Gordon, the DCR
8 knows and is aware of the treatment, but what is before
9 this Board with respect to success rate of regeneration
10 on FMA agreements -- what is in the Panel 4 evidence
11 with respect to success rate of regeneration on FMA
12 agreement areas?

13 MR. GORDON: A. As far as I can recall,
14 there was nothing specifically put in front of the
15 Board to show such results. It was recognized that our
16 benchmark, as far as regeneration success, is free to
17 grow and that FMAs had been in place since the 1980s
18 and it takes a number of years for stands to become
19 free to grow.

20 THE CHAIRMAN: Mr. Castrilli, could we
21 find a convenient time for a break.

22 MR. CASTRILLI: You are accurate, Mr.
23 Chairman.

24 THE CHAIRMAN: Very well. We will break
25 for 20 minutes.

1 ---Recess taken at 11:05 a.m.

2 ---Upon resuming at 11:28 a.m.

3 THE CHAIRMAN: Thank you, ladies and
4 gentlemen. I apologize for the delay.

5 We shall make it up to you, Mr. Castrilli,
6 one way or the other.

7 MR. CASTRILLI: By not adjourning for the
8 day?

9 Q. Mr. Gordon, we were continuing -- we
10 were discussing Exhibit 172. The middle column on the
11 last page of Exhibit 172 at the top, Mr. Chaudhry notes
12 that:

13 "We now have all the facts about
14 silvicultural treatments on several
15 thousand acre areas and, on the other
16 hand, a detailed picture of regeneration
17 assessment on more than half a million
18 acres providing an ideal opportunity for
19 analyses..."

20 And his comments go on to suggest that
21 interest has been expressed in analysing this data by
22 the U.S. Forest Research Centre and by Ph.D students.

23 Tell me, has the Ministry of Natural
24 Resources analysed the data being referred to by Mr.
25 Chaudhry?

1 MR. GORDON: A. I believe the data that
2 Mr. Chaudhry is referring to are what we call our
3 project records and on those forms there are a number
4 of boxes that you fill in specific information
5 pertaining to certain projects -- pertaining to that
6 project.

7 And it is based on this article and Mr.
8 Chaudhry's position that we could do a detailed
9 analysis based on the information put on these cards.
10 And I believe you could only do that if the information
11 that was going on those cards was recorded relative to
12 a very clear set of description standards across
13 Ontario.

14 And recognizing the different site types
15 across Ontario, and based on my experience on how that
16 information is recorded, I do not think it is possible
17 to do the type of analysis that Mr. Chaudhry is
18 inferring can be done.

19 Q. So your testimony is that the
20 results -- we do not have the results -- well, let's
21 put it this way: There has been no analysis of this
22 data by MNR and we do not have, in any event, the
23 results of that analysis before this Board; is that
24 correct?

25 A. For a good reason. The analysis that

1 Mr. Chaudhry is recommending that should have been
2 carried out and, as far as I know - and perhaps someone
3 else in the panel can correct me - was not carried out.

4 Q. Moving on to the last paragraph --

5 THE CHAIRMAN: Mr. Armson, did you want
6 to add anything to that?

7 MR. ARMSON: No, Mr. Chairman. I just
8 noticed our microphone was on the other table.

9 THE CHAIRMAN: Sorry.

10 MR. CASTRILLI: It is quite all right.

11 Q. Mr. Gordon, moving to the last
12 paragraph of Mr. Chaudhry's article, he notes:

13 "The foresters reading these comments may
14 be surprised to hear that more than
15 95 per cent of the areas assessed in the
16 conifer working groups in northern
17 Ontario are not free to grow when judged
18 by quite simple and generous criteria.
19 This is a matter for alarm not concern!"
20 Do you agree with that assessment, Mr.

21 Gordon?

22 MR. GORDON: A. I have no reason to
23 disagree with the percentage that Mr. Chaudhry has
24 quoted. I was unable to find the data that can come up
25 with such a number in that I do not know the basis for

1 his calculation.

2 However, I think we have to recognize one
3 thing, that the system that Mr. Chaudhry was using that
4 determined whether or not a stand was free to grow or
5 not was, if I may term it, ruthless, and that if you
6 identified as the desired working group species jack
7 pine, in the computer program that did this analysis -
8 and I assume was the basis for Mr. Chaudhry's
9 percentage - it only allowed that stand to be free to
10 grow in the jack pine working group.

11 For example, if there was a significant
12 component of black spruce, it was not recognized and,
13 therefore, it comes out with a simple yes/no answer.
14 And if, for example, when you use our regional
15 benchmark standards, which I think are reasonable and
16 reflect what is actually happening out there, we
17 recognize that there can be secondary species on a site
18 and can contribute to a stand being free to grow.

19 Whereas, in this simple mathematical
20 calculation, which I believe was the basis for Mr.
21 Chaudhry's conclusion, it did not take into account
22 these other species that were on the site at the time
23 that the assessment was done.

24 Not only that, you may have entered the
25 desired working group as, for example, being black

1 spruce and the stand is only compared to the black
2 spruce standard, whereas if the computer had compared
3 the species that were found on that site to the jack
4 pine standard, it may have been free to grow.

5 So that's what I mean by it being
6 ruthless. It was very specific, it looked at one
7 species and only compared it to one standard. And we
8 have recognized that and that's why we have recognition
9 of that in our regional benchmark standards.

10 So what I am trying to say is, perhaps
11 the 95 per cent is misleading.

12 Q. Well, hold on a minute. He is
13 referring to the standards that were in effect at that
14 time; is he not?

15 A. That is correct.

16 Q. Maybe I should ask you this, Mr.
17 Gordon: You have filed in Document 17 a set of
18 benchmark standards for each MNR region with respect to
19 free to grow; is that right?

20 A. That is correct.

21 Q. Do we have in the evidence of the MNR
22 in Panel 4 the standards that were used by Mr.
23 Chaudhry, or maybe I should put it this way: How much
24 other free to grow benchmark standards have there been
25 since 1980?

1 A. There was a standard included
2 relative to free to grow in the Regen Survey Manual for
3 1981, and I believe we made you aware of those 1981
4 standards.

5 Q. Sorry, this isn't Appendix 10, that's
6 something else in that volume that has not been filed;
7 is that right?

8 A. That is correct. I believe we may
9 not have filed that manual.

10 Q. I think you have actually filed it
11 for a subsequent panel, Mr. Chairman, but that is what
12 you are referring to, the binder that you had yesterday
13 or you have now?

14 A. That is correct.

15 Q. Okay.

16 MR. FREIDIN: That's the document that we
17 will be providing to you in answer to one of your
18 interrogatories, Mr. Castrilli.

19 MR. CASTRILL: All right. Okay.

20 Q. So those are the standards that Mr.
21 Chaudhry is referring to, or would have relied upon for
22 his comments; is that right?

23 MR. GORDON: A. It doesn't tell me in the
24 article as to what standards he referred to, but I am
25 surmising that those are the standards he was using.

1 Q. Are there any others between that
2 manual in 1981 and the set you filed in Document 17?

3 A. Not to my knowledge.

4 Q. Okay, that's fine. We will come back
5 to the ruthless analysis when we get to the SOARS
6 project.

7 THE CHAIRMAN: Gentlemen, are you aware
8 of any response to this article by anybody in a
9 subsequent issue of the Forester?

10 MR. CARY: No, I am not.

11 MR. ARMSON: I do not believe there was,
12 Mr. Chairman.

13 MR. CASTRILLI: Q. Before the break, Mr.
14 Armson, you were referring to NSR 4 and 5 lands. I
15 believe in response to one of my questions you noted
16 that cost of access roads could be a factor that would
17 make it too prohibitive to regenerate those lands.

18 Do you recall that evidence?

19 MR. ARMSON: A. Yes, I do. I believe
20 that was in responding to a question by Mr. Martel.

21 Q. Yes. I am just wondering, Mr.
22 Armson, if a logger can get into an area to cut it, why
23 can't someone else get into the area to regenerate it?

24 A. The example I referred to was
25 specifically in the Lake Abitibi region, and I believe

1 I noted in my answer that at that time that the area --
2 one of the examples of the area of lack of access was
3 one it was, I believe, by either rail or by boat and
4 certainly the wood was extracted and moved to the mill
5 by towing and booms. That was one of the key reasons.
6 There were no all-weather roads to enter the area and
7 site-prepare and plant.

8 Q. I don't understand the answer. If
9 you can get into an area to cut it by whatever means,
10 could you not use the same means to get into the area
11 to regenerate it?

12 A. Not necessarily. 30, 40, 50 years
13 ago there were many areas that would have been accessed
14 either in the winter or by means that were no longer
15 available.

16 Q. So winter access is the factor you
17 are focusing on?

18 A. No, it is one of the matters. Water
19 access, certainly one can't site-prepare with one
20 exception of winter shearblading, normal site
21 preparation is undertaken in the frost-free season, it
22 requires access by road wheeled vehicles.

23 MR. GORDON: A. Maybe I can add
24 something, Mr. Castrilli. They would have looked at
25 areas that have been harvested over a number of years.

1 And so in the year that the survey was
2 carried out, there would be some areas that had been
3 harvested perhaps five or six years ago previously.
4 Some of those areas may have been harvested in the
5 summer and over time, because of weather, some of those
6 roads that were used to access those specific stands
7 for harvesting would deteriorate over time.

8 And so, therefore, for you to go back and
9 do perhaps the necessary site-preparation work before
10 you would plant the area, for example, it would be very
11 expensive and, therefore, it was considered, on some
12 areas, that it was so expensive that you would not
13 consider going back.

14 Q. So the original roads may have been
15 just dirt and still are?

16 MR. ARMSON: A. No. In many instances
17 in that area there would have been winter roads; that
18 is, where there had been a right-of-way, if you like,
19 cleared but not necessarily stumps removed and the road
20 made from snow and ice.

21 Q. Another matter that I believe Mr.
22 Gordon referred to before the break was the
23 Silviculture Information System Coordinator, you
24 referred to Mr. Skinkle?

25 MR. GORDON: A. That's correct.

1 Q. Could you advise of Mr. Skinkle's
2 background and experience and training to do that work
3 that he will be required to do, if you know?

4 A. I can give you a brief synopsis of
5 what I know about Mr. Skinkle and before Mr. Skinkle
6 was in his present position, he previously worked in
7 Alberta for their forestry service as a professional
8 forester.

9 And, previous to that, he was my
10 supervisor in Manitouwadge and that was he was the
11 forest management supervisor in Terrace Bay District
12 for a number of years, and I can't recall the exact
13 number of years, but if you so wish, I can find that
14 out.

15 And, previous to that, he was a unit
16 forester in at least one location. The one I recall is
17 Gogama. So he is aware of "the Ministry's system".

18 Q. And it is your understanding that the
19 position of Silvicultural Information System
20 Coordinator is the replacement position in every
21 respect to Regeneration Assessment Specialist category
22 that was terminated in 1985; is that right?

23 A. I can't comment on that. I have
24 never seen the job specification for either of the
25 positions we are talking about.

1 Q. Mr. Armson, are you in a position to
2 add to that?

3 MR. ARMSON: A. No, I cannot.

4 Q. Thank you.

5 DR. OSBORN: A. Mr. Chairman, I can add
6 something to that that may help in terms of the
7 silvicultural assessment system.

8 Up until '85, the system was primarily a
9 data processing system run out of Toronto and some of
10 the functions of the position at that time were the
11 synthesis and compilation of the data out of the main
12 frame in the Toronto area.

13 Now, since 85-86 there has been a
14 development of the system Mr. Gordon has been alluding
15 to which is primarily a decentralized district level
16 data processing system. And, to that extent, the
17 position now of Mr. Skinkle is somewhat different from
18 that held by Mr. Chaudhry back in '84 in that the
19 fuctions of centralized data processing and its
20 synthesis and compilation now have been primarily
21 decentralized.

22 So there is some difference in
23 responsibilities and application of the system.

24 THE CHAIRMAN: Regardless of what you
25 call the position, and regardless of what its functions

1 are or what are entailed within the job description,
2 would you consider that the Ministry is any less
3 interested in silviculture or regeneration than it was
4 prior to that particular position being changed?

5 DR. OSBORN: No, sir.

6 THE CHAIRMAN: Okay.

7 MR. CASTRILLI: Q. The last matter that
8 was dealt with before the break, Mr. Armson, I believe,
9 was a comment by you and that was about the issue of:
10 Some of what foresters do is not documentable.

11 Do you recall that testimony?

12 MR. ARMSON: A. Yes, I do.

13 Q. And a need for flexibility?

14 A. Yes, I do.

15 Q. How does one determine accountability
16 in those circumstances?

17 A. The accountability of a unit forester
18 is: He is accountable to his immediate supervisor and
19 that is normally in our system the forest -- the
20 district forest management supervisor.

21 He is also accountable for the management
22 plans which he prepares and is accountable in that
23 sense to the district manager and to regional and main
24 office staff who have the responsibility for approving
25 that plan.

1 THE CHAIRMAN: What do you mean by
2 accountable? Does he get fired if he did not do the
3 job, or does he get reassigned, or does he get
4 something noted on his record, or what exactly does
5 accountability mean in that context?

6 MR. ARMSON: The accountability, Mr.
7 Chairman - that question was one that the committee had
8 to wrestle with in its deliberations - is accountable
9 through essentially a process in which there is a
10 regular appraisal either on a semi-yearly or annual
11 basis that is required within the Ministry, and we
12 determined that in many instances, while those
13 appraisals were held, they often dealt with the
14 non-professional in the sense that the accountability
15 for the timber management activities was more "doing
16 your job, being there on time" and so on.

17 And the committee - and I am going from
18 recollection - but was concerned that the
19 accountability for, for example, silvicultural
20 activities should be much -- should be broader and
21 should be a part of that appraisal process with the
22 supervisor.

23 So that is where the word accountability
24 and its implementation came into discussions. And, as
25 I say, a firm recommendation was made in that respect.

1 MR. CASTRILLI: Q. Mr. Gordon, could I
2 ask you to turn to Exhibit 28, the Provincial Auditor's
3 Report.

4 THE CHAIRMAN: What page are you going to
5 be referring to?

6 MR. CASTRILLI: Page 22.

7 MR. GORDON: I can't seem to find my copy
8 right now. Is there an extra copy?

9 MR. CASTRILLI: Perhaps you could borrow
10 Mr. Armson's.

11 MR. GORDON: Page 22.

12 MR. CASTRILLI: Q. I see in that
13 paragraph that the auditor is dealing with the issue of
14 the Ministry's regeneration efforts. And if you look
15 at the last paragraph before the four indented items
16 the auditor notes:

17 "There is a lack of any indicators of the
18 benefits provided to the public industry
19 from the Ministry's regeneration efforts.
20 Some examples of useful indicators would
21 be..."

22 And the auditor lists four: Area
23 actually regenerated as a percentage of areas requiring
24 regeneration; secondly, areas requiring further
25 regeneration efforts as a result of regeneration

1 failures; thirdly, planting survival rates as a
2 percentage of trees planted; and, fourth, additional
3 volumes and areas opened up for harvesting and
4 subsequent regeneration as a result of road
5 construction."

6 Could you advise the Board whether any of
7 that information in the four ways set out there are
8 contained in the Panel 4 evidence?

9 MR. GORDON: A. Working from the bottom
10 up: Additional volumes and areas opened up for
11 harvesting and subsequent regeneration as a result of
12 road construction. In Panel 4 we haven't presented any
13 such results.

14 Q. I am sorry, your answer is no?

15 A. We haven't presented any such
16 results.

17 Q. Have not?

18 A. Right.

19 Q. Thank you. I couldn't hear because
20 of the barking dog.

21 A. Planting survival rates as a
22 percentage of trees planted. We have presented some
23 information on that area.

24 Q. Sorry, what would that be?

25 A. Second-year survival rates.

1 Q. That is for the management units?

2 A. And the Provincial Summary 81-87.

3 Q. Okay.

4 A. Areas requiring further regeneration
5 efforts as a result of - as the provincial auditor
6 terms it - regeneration failure. We have presented the
7 results of our NSR surveys that indicate areas that are
8 not free to grow.

9 Q. Sorry, which document is that?

10 A. That's at page 220, Document 26 and,
11 as well, the information on this Document 26 is based
12 on Document 25.

13 Q. That's fine. And with respect to the
14 first item?

15 A. The information pertaining to that
16 would tend to be the SOARS information.

17 Q. SOARS. That's fine.

18 THE CHAIRMAN: Just to complete the
19 picture, is there something in here by way of a
20 Ministry response to that statement?

21 MR. CARY: Mr. Chairman, if I may. The
22 Ministry responded to the provincial auditor's report
23 and that response was comprehensive and we are looking
24 at -- and we made a comprehensive response to all the
25 recommendations that the auditor wrote up.

1 We have completed our task in that regard
2 and submitted the results of our efforts to the
3 provincial auditor.

4 THE CHAIRMAN: That's not in this
5 document though?

6 MR. CARY: No, it is not. No, it is not
7 in this document. If I may just -- if we can deal with
8 this section too, I should just like to add that we
9 have implemented some other of the suggestions in this
10 particular section that we are looking at right now.

11 MR. CASTRILLI: Mr. Chairman, I just
12 asked about the four.

13 Q. Is there anything you wish to add
14 with respect to the four?

15 MR. CARY: A. No, there is not at this
16 time.

17 Q. Thank you. Mr. Armson --

18 THE CHAIRMAN: Well, just hold it a
19 second, Mr. Castrilli. I mean, I realize this is your
20 cross-examination but the Board does want, I think, to
21 have a complete picture.

22 Was it the intention of the Ministry to
23 file, at some stage, this response to the auditor's
24 report?

25 MR. CARY: I am not aware of that

1 intention at this point in time.

2 MR. FREIDIN: In re-examination.

3 MR. CASTRILLI: Q. Can I just ask when
4 the response -- I guess this a further response, was
5 prepared?

6 MR. CARY: A. We have had an ongoing
7 dialogue with the provincial auditor's office since
8 1985, and updates have been supplied to him, I am not
9 quite sure how frequently during the year, but at least
10 once a year, I believe.

11 THE CHAIRMAN: Is this the only audit? I
12 mean, is the only recent audit that was done with
13 respect to the Ministry's practices by the provincial
14 auditor? How often is this done?

15 MR. CARY: To my knowledge this is the
16 only one that I am aware of. There may have been one
17 done in the 70s, but I am simply not aware of it.

18 THE CHAIRMAN: No, but I mean recently.

19 MR. CARY: As far as I am aware of, this
20 is the only audit conducted by the provincial auditor
21 of the forest management program.

22 MR. FREIDIN: Mr. Chairman, my copy of
23 Exhibit 28, if you have the entire document, does in
24 fact include the official response by the Ministry.

25 THE CHAIRMAN: Well, that is what I

1 asked. I seem to infer that there is an additional
2 response.

3 MR. FREIDIN: Right. Exactly, that's
4 right, sir. There has been an additional response, and
5 if that is what your question referred to, I intend to
6 put that material before the Board.

7 THE CHAIRMAN: Thank you.

8 MR. CASTRILLI: Q. Is there any reason
9 why it wasn't part of your evidence-in-chief?

10 MR. CARY: A. As part of Panel 4?

11 Q. Yes.

12 A. We felt that it was -- we didn't feel
13 it appropriate to include it.

14 Q. You felt it was appropriate to deal
15 with it in re-examination?

16 A. That was the counsel's remark.

17 MR. CASTRILLI: Mr. Chairman, I would
18 like to reserve to right cross-examine with respect to
19 that document if it deals with matters arising from
20 Panel 4.

21 THE CHAIRMAN: I think that is
22 reasonable.

23 MR. CASTRILLI: Thank you.

24 MR. FREIDIN: You are talking about the
25 update?

1 MR. CASTRILLI: Yes, or whatever it was.

2 Q. Mr. Armson--

3 MR. ARMSON: A. Yes.

4 Q. --Document 27 commences the SOARS
5 material; is that right?

6 A. That is correct.

7 MR. CASTRILLI: Mr. Chairman, is it your
8 intention that we would break for lunch at one?

9 THE CHAIRMAN: I thought we would
10 probably break around a quarter to one.

11 MR. CASTRILLI: A quarter to one.

12 THE CHAIRMAN: If that is okay--

13 MR. CASTRILLI: That's fine.

14 THE CHAIRMAN: --and break until two
15 o'clock.

16 MR. CASTRILLI: That's fine, thank you.

17 Q. Mr. Armson, Document 27, which is the
18 results of the SOARS -- is the SOARS Survey, reports on
19 plantations older than 10 years and seeded areas older
20 than 15 years; is that correct?

21 MR. ARMSON: A. Yes.

22 Q. So that if I understand Document 27
23 in this regard, it starts in 1984 and goes back 10
24 years from 1983-1973 before it started to report on
25 data; is that right?

1 A. Yes.

2 Q. Thank you. Would you agree with me
3 that there was a gap of reporting data for northern
4 Ontario in these three, in particular, northern regions
5 for the period 1973 to date?

6 A. That is correct.

7 Q. And that would also be true for the
8 other two northern Ontario regions which are not dealt
9 with in SOARS; is that right?

10 A. They -- I believe they upped the date
11 by, I think it was by two years because they began that
12 survey in '86. So I believe they actually go to the
13 '75 or '76 from the time of establishment.

14 In some cases, the time may have been
15 75-76, 74-73 depending on time of treatment.

16 Q. But those are -- Mr. Armson, let's
17 not clutter the record with real confusion. We don't
18 have anything about SOARS for the other two regions; is
19 that right?

20 A. That is correct.

21 Q. And we will not have anything
22 comparably designed with respect to those two regions
23 for a period of time to come; is that right?

24 A. Yes. The data have been collected
25 and there have been some preliminary - I don't know -

1 aggregation of the data, but there is no comparable
2 report as yet. As I indicated, the timing for doing
3 that is during the current year.

4 Q. And no doubt before this hearing is
5 over we may well see that; is that correct?

6 A. I would certainly anticipate that.

7 Q. Mr. Armson, I understand from the
8 evidence in that document, that the Ministry of Natural
9 Resources identified three types of stems. First I
10 would like to refer you to page 228.

11 MR. CASTRILLI: Mr. Chairman, we are
12 looking at the last full paragraph on that page.

13 Q. There are three stems or three types
14 of stems identified by the Ministry in this report.
15 First, those from planting or seeding; secondly, those
16 from ingrowth; and, thirdly, those from advanced
17 growth.

18 Is that right?

19 MR. ARMSON: A. That was the segregation
20 that was attempted, yes.

21 Q. Can you confirm for me, Mr. Armson,
22 that advanced growth; i.e., growth present at the time
23 of planting or seeding is natural regeneration?

24 A. Yes. And, if I might, unless there
25 had been a previous attempt, of which there was no

1 record but, generally, yes, that would be natural.

2 Q. Thank you. Can you also confirm for
3 me that ingrowth; that is, that which arose after
4 planting and seeding, is also natural regeneration?

5 A. Yes, it may be -- its presence may be
6 enhanced by a site-preparation treatment that has
7 occurred either in relation to seeding or planting.

8 Q. But it is natural regeneration?

9 A. We would count that as natural, sir.

10 Q. All right. And can you confirm for
11 me that only the planting or seeding itself can be
12 considered, strictly speaking, artificial regeneration?

13 A. In the terms of this survey, yes.

14 Q. Can you confirm for me, Mr. Armson,
15 that you did not report on these separately in the
16 study?

17 A. We did not report on them separately
18 in the report that you have, Mr. Castrilli.

19 Q. Did you report on them in a report
20 that I do not have?

21 A. I would have to go back to the
22 individual plot data and then look at that and that I
23 cannot speak to at this time. There were masses of
24 data.

25 Q. Not that I want it, you do

1 understand. I just wanted to know if it is not
2 reported upon in this document?

3 A. It is not reported upon in this
4 document, you're correct.

5 Q. Would you agree with me that it would
6 be fair to say that the level of regeneration to the
7 target species by artificial regeneration methods could
8 be lower if some of the target species were, in fact,
9 obtained by other than planting or seeding; that is, by
10 natural regeneration?

11 A. Just to be sure that I am clear...

12 Q. I can repeat the question, if you
13 want.

14 A. Yes, if you would, please?

15 Q. Sure. Would it be fair to say that
16 the level of regeneration to the target species by
17 artificial regeneration methods could be lower if some
18 of the target species were, in fact, obtained by other
19 than planting or seeding; that is, by natural
20 regeneration?

21 A. It could be, yes.

22 THE CHAIRMAN: Why do you care whether it
23 is lower, in the sense that, are you not worried about
24 the overall regeneration, whether or not it is from
25 artificial or natural?

1 MR. ARMSON: The first level would be
2 whether the treatment resulted in the stand becoming
3 the working group that was desired and, to the degree
4 that natural regeneration might enhance that move, and
5 generally it might be regarded as a benefit.

6 On the other hand, and I would use this
7 example where we have seeded, for example, jack pine
8 and, for whatever reason, natural jack pine
9 regeneration took place, that may in fact give us a
10 very dense stand and I think some of the figures would
11 suggest this, and that may give cause for some concern
12 in terms of having to pre-commercially thin it or space
13 it out later on.

14 THE CHAIRMAN: So you would have an
15 overstocking?

16 MR. ARMSON: So in fact, yes. And that
17 has been some of the experience we have had that where
18 we have treated for artificial regeneration we have
19 actually brought in, if you will, an enhanced natural
20 regeneration.

21 MR. CASTRILLI: Q. Now, I understand
22 from your testimony that the inability to achieve the
23 precise type of stand that was aimed for does not
24 represent an overall failure to regenerate an area; is
25 that correct?

1 MR. ARMSON: A. That is correct.

2 Q. But it does represent a silvicultural
3 effectiveness failure; does it not?

4 A. Yes. It means that the target that
5 was aimed at was not achieved. Certainly at the time
6 of this survey it was not achieved.

7 Q. Would you agree with me that this
8 also represents a situation where the treatment may not
9 have been necessary as it may have regenerated to the
10 species obtained without a regeneration effort to try
11 and obtain the target species?

12 A. Yes. And I would point out that
13 these were periods when there was perhaps much less
14 experience to draw upon as to what could be and what
15 would result.

16 Q. If I could put it in layman's terms,
17 Mr. Armson, isn't it analogous to planting corn and
18 getting rhubarb?

19 A. I would think it would be more
20 analogous to planting corn and perhaps getting barley
21 or oats.

22 Q. Is that what farmers strive for?

23 A. Well, what I am suggesting is that
24 when one sows or plants jack pine, and gets black
25 spruce or, for that matter even poplar, one is still

1 dealing with a species and a type of tree that has
2 some -- generally included in our production forest.

3 THE CHAIRMAN: Any significance in your
4 example that what you chose could probably be
5 distilled?

6 MR. ARMSON: I will let the Board draw
7 its own inferences, Mr. Chairman.

8 MR. CASTRILLI: Q. Mr. Armson, your
9 evidence calls it a wasted effort; does it not?

10 MR. ARMSON: A. I don't believe --
11 recall using those words.

12 Q. You don't. Would you turn to page
13 174. We are on a page that has a heading called:
14 Ineffective silviculture, the second paragraph, the
15 portion in the middle of the page, the sentence begins:

16 "Although the pine stand represents
17 effective regeneration, the
18 silviculture..."

19 That is a situation where the black
20 spruce was planted:

21 "Although the pine stand represents
22 effective regeneration the silvicultural
23 treatment has not achieved the intended
24 objective; i.e., establishment of a black
25 spruce plantation. In this case there

1 has been a wasted effort."

2 Not your words?

3 MR. ARMSON: A. Those are not my words
4 and I believe they are taken in a very limited context
5 and if I might explain why I would not use the words.

6 During the period of the late 60s and
7 into the 70s and even to this day, I believe that the
8 inability to achieve a particular objective, such as a
9 treatment aimed at regenerating an area to some
10 species, black spruce or jack pine, that fails is not a
11 totally wasted effort because we have learned more from
12 our failures than we ever have from our successes.

13 And, therefore, they are not totally
14 wasted efforts. It is when we do not learn from our
15 failures that we have -- might -- I would suggest have
16 a full wasted effort.

17 Q. Who wrote Document 16?

18 MR. GORDON: A. A number of people were
19 involved and...

20 Q. It is a Ministry document; isn't it?

21 A. That's correct. A number of Ministry
22 individuals were involved.

23 Q. So somebody in the Ministry thinks it
24 was a wasted effort?

25 A. That's correct, and that is my

1 evidence.

2 Q. Thank you. Mr. Armson, I also
3 understand your evidence to be that the precise
4 management objective in regeneration was not usually
5 known; this is with respect to SOARS?

6 A. Yes. I cannot speak, since I wasn't
7 with the field party undertaking all this, but it is
8 the general -- I think it would be generally stated
9 that the early project efforts often did not have,
10 apart from planting the species, a context in terms of
11 the management objective, in the sense that we do have
12 now with the Timber Management Planning Manual.

13 Q. And you actually set that out at
14 page -- excuse me, 236 of your evidence; is that
15 right?

16 A. Yes, I refer to that on page 236.

17 Q. It is the second full paragraph
18 there?

19 A. Yes, that's correct.

20 Q. Would you agree with me, Mr. Armson,
21 that the management objective should in fact have been
22 very well-known?

23 A. In retrospect, yes.

24 Q. Does this suggest again the poor
25 state of MNR recordkeeping?

1 A. I would suggest that in Panel 2 I
2 clearly gave the -- expressed the description of the
3 state of development of forestry and forest management
4 in this province and, in fact, in the late 1950s,
5 certainly the 60s and 70s and even continuing to more
6 recently, but certainly not since 1980 and '86 for
7 specific areas, there has been a lack of very specific
8 management objectives.

9 Q. I was talking about and I asked you a
10 question about: Does this plot again reflect the poor
11 state of MNR recordkeeping, not to have known the
12 management objective?

13 A. I think it is clear that there has
14 been a poor state of recordkeeping.

15 Q. Thank you. Doesn't your statement
16 also suggest that notwithstanding money was spent on a
17 regeneration effort, nobody in MNR knew what the
18 situation was at the time of planting?

19 A. Would you repeat? I am very unclear
20 as to that question. Would you mind repeating it, Mr.
21 Castrilli?

22 Q. Notwithstanding money was spent on a
23 regeneration effort, no one at MNR knew what was going
24 on at the time of planting?

25 A. At the time of planting?

1 Q. Yes.

2 A. The planting was all being done in
3 the field. The people who were undertaking the
4 planting -- I am very unclear, Mr. Castrilli. I am
5 sorry, but I cannot follow your question at all on this
6 one.

7 Q. Well...

8 THE CHAIRMAN: Do you want to try and
9 rephrase it, Mr. Castrilli? We are having difficulty
10 as well.

11 MR. CASTRILLI: Q. Yes. Page 236 you
12 state:

13 "There was a lack of knowledge of the
14 evidence of MNR planting or stocking
15 standards at the time."

16 Is that right?

17 MR. FREIDIN: Where are you referring
18 from, please?

19 MR. CASS: Page 236.

20 MR. FREIDIN: Where on the page?

21 MR. CASTRILLI: Actually I am asking him:

22 Q. Isn't that in fact what you are
23 saying?

24 MR. ARMSON: A. Would you refer me to my
25 words on page 236. I think that is perhaps the

1 difficulty.

2 Q. You indicate:

3 "The precise objective in regeneration
4 was usually known."

5 Now, what were those plantations being
6 planted to, were they not being planted to standards?
7 Are you trying to tell me they planted without knowing
8 what they were trying to achieve. Is that your
9 evidence?

10 MR. FREIDIN: Can you direct him to the
11 section that you are referring to?

12 MR. CASTRILLI: Mr. Freidin, with great
13 respect, it is the paragraph I have been talking about
14 for the last ten minutes. Paragraph 2 on that page.

15 MR. FREIDIN: Thank you.

16 MR. CASTRILLI: The second full paragraph
17 on the page.

18 MR. ARMSON: Yes. I read that paragraph.
19 It is a one-sentence paragraph, a short one, yes.

20 MR. CASTRILLI: Q. What were the
21 management objectives that were being planted to at the
22 time? Are you trying to tell me no one knew what
23 objectives or what standards they were planting to at
24 that time?

25 MR. ARMSON: A. We are not talking not

1 about standards. Mr. Castrilli, the word standard is
2 quite distinct from the way I have used the word
3 objective. I am talking about the precise management
4 objective, I'mnot referring to a standard at all.

5 Q. Oh, you are not. All right, let's go
6 on then. Isn't it true that the stands planted between
7 1972 2 and 1973 which are the subject matter of your
8 study, Document 27, should have been measured against
9 the standards of the period, such as the 1971 stocking
10 standards?

11 A. The '71 standards were in effect in
12 '71 and I presume there was some linkage, I cannot
13 speak to that directly, but those standards were there.

14 Q. And wouldn't you have in fact been
15 applying the 1971 standards to plantations as old as
16 1966?

17 A. I cant speak to whether they were or
18 whether they weren't.

19 Q. You don't know? Wasn't the basic
20 idea behind the majority of the plantations of that
21 period; i.e., around 1971, to obtain pure or almost
22 pure stands of desired or target species?

23 A. I have no idea. Those -- whatever
24 was in the minds of those who decided on the project, I
25 would suggest that professional experience, for the

1 most part, both even at that time and since as such
2 that one would not expect "pure" stands, if by that you
3 mean, the only species there or the only individuals
4 are the ones that are placed there artificially by
5 planting or seeding.

6 Q. But isn't that in fact what the 1971
7 stocking standards are all about, or were all about?

8 A. I don't believe so.

9 Q. You don't believe so. But is it your
10 testimony that the stands planted between, for example,
11 1972 and '73 were measured against the new free to grow
12 standards, or perhaps the standards we see in the SOARS
13 survey?

14 A. No. The stands that were measured in
15 the SOARS survey were measured basically for
16 information, mensurational information. They were not
17 measured specifically using free to grow criteria at
18 that time. That was not the purpose of the SOARS
19 survey.

20 As I indicated, again in my previous
21 evidence, the second part of the summary was something
22 that was done later to give management -- senior
23 management of the Ministry some sense of what that
24 might mean in terms of inventory criteria, but the
25 purpose of the SOARS study was not for the purpose of

1 determining whether the stand was free to grow and,
2 therefore, in the production forest or not.

3 Q. I see. Now, still on this paragraph
4 on page 236 about not knowing the precise management
5 objective in regeneration.

6 Were there management plans for the
7 management units that the SOARS study was carried out
8 on?

9 A. There may or there may not have been.

10 Q. You don't know that either?

11 A. I would be very sure that for some of
12 the areas and units in which the SOARS was undertaken,
13 that at the time, certainly of the treatment, there
14 were not management plans and that for some of them
15 there were management plans.

16 Q. Well, for those that had management
17 plans, did they specify the nature of the silvicultural
18 work to be done?

19 A. The plans that were in place in the
20 1950s, 60s, possibly even into the early 70s would
21 probably vary in the way in which they expressed
22 objectives, and I believe Dr. Baskerville had some
23 comments on that.

24 They may be -- in other words, they may
25 be state very broadly or they might be more

1 specifically defined.

2 Q. Well, were these plans not examined
3 to determine the nature of the silvicultural work in
4 order to determine it and compare it to the results?
5 Are you saying that nothing like that was done?

6 A. The SOARS study, the staff
7 undertaking that, were not instructed to examine all
8 management plans where they existed in relation to the
9 work.

10 Q. They were specifically instructed not
11 to?

12 A. No, they weren't instructed to do it.
13 They weren't --

14 Q. That is what I just said, they were
15 not instructed to do it.

16 A. No, they were instructed to carry out
17 a survey.

18 THE CHAIRMAN: I think there is a
19 difference between instructing them specifically not to
20 do it and not saying anything to them; i.e., not
21 instructing them to specifically do it.

22 MR. CASTRILLI: Q. You said nothing
23 about whether they should instruct -- whether they
24 should inspect the management plans; is that right?

25 MR. ARMSON: A. That's correct.

1 Q. So you don't know whether they did or
2 they didn't?

3 A. That's correct.

4 Q. And you don't think having that
5 information would have been of help to you in producing
6 the study?

7 A. The purpose of the study was to
8 determine on a certain basis what existed there. It is
9 quite possible to go back from, in any specific area,
10 and go back to an existing plan, if it was there. The
11 survey group crew were not asked to do that.

12 Q. Are you saying this was not thought
13 of; i.e., examining the plans? It wasn't something you
14 would have thought about yourself in giving
15 instructions?

16 A. In 1984 it was not a concern of mine
17 at that time.

18 Q. Do you think it would have helped you
19 to determine precisely what the management objective in
20 regeneration was for a particular area that the
21 management unit was on?

22 A. No. From my limited knowledge of
23 certain old plans, if I had thought about it, I would
24 have been sure that the crew going out there would have
25 had some difficulty in instances trying to determine

1 what very specific objectives were.

2 Q. Well, you can't really know that
3 unless you ask them to do it and they go and do it and
4 tell you that; isn't that right?

5 A. Yes, but they weren't asked.

6 Q. That's right, they weren't asked.

7 MR. GORDON: A. Maybe I could add
8 something here, Mr. Chairman.

9 It has been my experience in Terrace Bay
10 District in looking any of the old plans that are
11 available that relative to the management objective
12 that Mr. Armson is looking for that the management
13 objective in that detail was not included in plans that
14 were of those dates.

15 And, therefore, when you wanted to go and
16 look at a specific project as to what was happening, as
17 Mr. Armson's surveyors did, in no way would you find
18 specific management objectives for those sites. There
19 was very little written down as far as silvicultural
20 objectives, even in a general sense, in these older
21 plans which go back into the 50s.

22 MR. CASTRILLI: Q. But you have not
23 looked at them, so what is that testimony based on?

24 MR. GORDON: A. It is based on my
25 experience of looking at old plans within Terrace Bay

1 District and seeing that there are not very specific
2 management objectives for individual sites which is
3 what the comparison that Mr. Armson is talking about is
4 all about.

5 Q. All right. So your answer is
6 confined to Terrace Bay?

7 A. That is correct.

8 THE CHAIRMAN: Mr. Armson, is it not true
9 at any one point in time when management plans are
10 formulated at a particular period in time, that they
11 would be done in a rather consistent fashion. In other
12 words, if you are preparing management plans in the
13 50s, would they have been done in a sort of particular
14 format and contain generally throughout the province
15 the same type of information as contrasted to doing
16 them today in a different format but consistency see
17 would be, for that period in time, across the province.

18 Is that the way they are formulated?

19 MR. ARMSON: That is true, there was a
20 manual of for management planning requirements that was
21 in existence and I think that has been referred to
22 earlier.

23 If I might add, Mr. Chairman, the concern
24 for embodying silvicultural ground rules with very
25 specific objectives by working group, forest unit and

1 site class which was first introduced to the province
2 in the forest management agreements in 1980 was
3 basically reflected - my and other foresters'
4 concerns - to in fact have specific objectives.

5 And that, as I say, was introduced
6 formally in 1980 and is now part and parcel of the
7 provincial timber management planning process in the
8 area of the undertaking.

9 And I think that is the reason why - I am
10 not trying to be evasive with Mr. Castrilli - but why I
11 don't think, in all honesty, in '84 it really occurred
12 to me that that was -- we should go back and look at
13 those older plans where they existed abd keeping in
14 mind that in many areas older plans did not even exist.

15 MR. CASTRILLI: Q. How could there be no
16 management plan. Hasn't the Crown Timber Act required
17 one since at least 1947?

18 MR. ARMSON: A. I can only speak to the
19 fact that in statistics in past years and decades there
20 has often been a table indicating the units for which
21 management plans are in existence and the units for
22 which they are being prepared and the units for which
23 they do not exist.

24 For a whole variety of reasons which
25 again go back to the development of forest management

1 in this province, there have been, in past decades,
2 areas and units where there was not a 20-year
3 management plan available.

4 Q. In those circumstances, Mr. Armson,
5 how would management have been conducted without a
6 plan?

7 A. There would be five-year operating
8 plan, there would be one-year annual plans and
9 documents and those would be the documents that would
10 relate to the specific activities.

11 Q. Well, let me ask the \$24-question.
12 Would the information respecting silviculture and
13 regeneration work to be done be available from the
14 five-year operating plans and the annual operating
15 plans?

16 Is that something you could have
17 instructed your field people to look at to determine
18 what the management objectives were?

19 A. I cannot speak categorically, but I
20 would be very doubtful that it would be a fruitful line
21 of effort.

22 Q. You don't know, but you don't think
23 so?

24 A. That's correct.

25 MR. CASTRILLI: Mr. Chairman, this would

1 be a good place to break.

2 THE CHAIRMAN: Very well. Ladies and
3 gentlemen, we will adjourn until 2:00 p.m.

4 ---Luncheon recess at 12:45 p.m.

5 ---Upon resuming at 2:00 p.m.

6 THE CHAIRMAN: Thank you, be seated.

7 MR. CASTRILLI: Q. Mr. Armson, at
8 paragraph 47 of your evidence.

9 MR. ARMSON: A. Yes.

10 Q. You indicate the three questions you
11 were trying to answer in that paragraph.

12 A. That's correct.

13 Q. Would it be fair to say that this is
14 another indication of the state of the Ministry's
15 records--

16 A. That's correct.

17 Q. --at that time?

18 A. That's correct.

19 Q. Your evidence has been that the
20 relatively large number of desirable and and
21 non-desirable trees often comprise more of the total
22 density; is that correct?

23 A. Yes, that is correct.

24 MR. CASTRILLI: I am referring there, Mr.
25 Chairman, to paragraph 52(b).

1 Q. I wasn't really quite sure, Mr.
2 Armson, why you lumped those two particular categories
3 together.

4 Can we look at page 230, or beginning at
5 page 230. 230 to 231. We can really look at either
6 one at the same time.

7 Just taking a look then at page 230
8 first, it is the table on the northern region white
9 spruce plantations, north central region and
10 northwestern region white spruce plantations.

11 Would you agree that the numbers of
12 non-desirable trees often exceed more than one half of
13 the total density themselves?

14 A. Oh yes, very clearly.

15 Q. On August the 9th, you...

16 THE CHAIRMAN: What is your definition of
17 non-desirable?

18 MR. ARMSON: They were other commercial
19 tree species than the three conifers that were being
20 measured; that is the white spruce, black spruce, and
21 jack pine.

22 MRS. KOVEN: I thought Mr. Castrilli was
23 referring to non-desirable not other desirable.

24 MR. CASTRILLI: No, I am looking at
25 non-desirable.

1 In other words, Mr. Chairman, if I were
2 to look at the category non-desirable, in all three of
3 those tables on that page, in every instance on that
4 page as it happens, the non-desirable category often
5 exceeds by more than one half the total density all by
6 themselves. And Mr. Armson has indicated yes, that's
7 true.

8 Q. Is that right, Mr. Armson?

9 MR. ARMSON: A. Yes, that's correct.

10 MR. CASTRILLI: Now, Mr. Chairman, just
11 for your reference there is an indication in the SOARS
12 Report of the species that constitute non-desirable.
13 228, thank you.

14 And the other commercial tree species are
15 the ones that were mentioned earlier balsam fir, poplar
16 and birch.

17 Q. Now, Mr. Armson, on August 9th Mrs.
18 Koven commented - and at the time she was commenting on
19 the table at the next page which deals with black
20 spruce plantations for those three regions.

21 I took this down as best I could. I
22 believe she said: Nature does it much better than we
23 do, or words to that effect. And I recorded your
24 answer to be: Whether from fire or harvest it will be
25 tree species sooner or later.

1 Do you recall that exchange?

2 A. Yes, I believe I made that comment.

3 Q. Would you agree with me, Mr. Armson,
4 that the issue is why spend a fortune trying to grow
5 trees of a certain species through extensive artificial
6 regeneration techniques when -- if the industry engaged
7 in different harvesting practices then we might
8 actually be able to get trees of a species that you
9 want at much lower cost through the encouragement of
10 natural regeneration?

11 A. I don't follow the logic of your
12 statement. As has already been stated, there are
13 various ways of harvesting to bring about a high
14 probability of a certain species and composition.

15 In the instance in which we were
16 endeavouring to find information here, it was strictly
17 on the basis of those areas that had been artificially
18 treated. In fact, in many of those instances we did
19 not achieve the type of forest that presumably was
20 aimed at. And in that sense, yes, the area is not
21 populated by species some of which may be some of the
22 desirable and others, commercial species non-desirable.

23 But I think the point that was made also
24 in response to Ms. Koven's question was that the
25 purpose of artificial regeneration is to in fact direct

1 the stand towards a predominance of a given species and
2 a growing condition, if you will, that will result in
3 meeting management objectives.

4 Obviously, in many instances, these early
5 stands do not appear to be meeting those objectives if
6 we knew them.

7 Q. Mr. Armson, if the purpose of the
8 SOARS survey, as you have put it in your
9 evidence-in-chief on August 9th, was to determine what
10 happened to the trees MNR paid to have grown; isn't it
11 obvious from these tables -- we will just look at the
12 Table 2 on page 230 and 231, for example, that these
13 often show that the planted trees, if I can use the
14 term, beat out by the volunteers?

15 A. In some instances yes, in other
16 instances, no. For example, if we take the white
17 spruce plantations, much of the large white spruce in
18 the natural forest occurs in mixed wood stands. There
19 may be situations where there was an endeavour to
20 create a white spruce working group. But, in fact,
21 many of the areas here where there is a large number of
22 other commercial species may in fact result in mixed
23 wood stands with larger individual components of white
24 spruce than even the original mixed would have.

25 I am not suggesting that was may be the

1 best investment way to get it, but I am suggesting that
2 may be the result.

3 Q. Would you agree with me that these
4 plantations have a high component of hardwoods; i.e.,
5 your non-desirable species, balsam fir, et cetera,
6 utilizing the growth space of the stand?

7 A. Although not specifically identified
8 bay species in the non-desirable, I would expect and I
9 would certainly be pretty sure that many of the
10 non-desirable species are in fact, in many instances,
11 poplar and birth.

12 Q. That is not responsive to my
13 question, Mr. Armson. I asked you: These plantations
14 have a high component of hardwoods, balsam, et cetera,
15 i.e., the non-desirable species that are outlined, for
16 example, on page 230 and are they not, therefore,
17 utilizing the growth space of the stand and, in
18 particular, isn't it true that the space that they are
19 utilizing will lower the amount of growth from the
20 desired species, your target planted treats?

21 A. These areas in fact, yes, I have
22 already expressed the opinion there is and the facts
23 shows there is a stocking -- a density to other species
24 than the targets species. That varies with the area
25 and with the particular situation.

1 Q. Would you agree that MNR's efforts
2 appear to be more effective in obtaining non-desirable
3 species than trees you spent taxpayers' money to grow?

4 A. In these stands it is quite clear
5 that there is a significant proportion of the area that
6 does not go into a working group with a species which
7 was the target species.

8 Q. The answer to my question is yes?

9 A. Yes.

10 Q. I understand from your evidence at
11 page 228 that a number of species may be included as
12 desirable species in addition to the planted or seeded
13 species; is that correct?

14 A. There could only be two; that is, of
15 the -- there are only three desirable species and if
16 one was the target species it could be one or both of
17 the other two.

18 Q. Right. Would you agree that this
19 appears to increase the likelihood of regeneration work
20 being successful, but it raises the question of what
21 the results would have been if no regeneration work was
22 carried out?

23 A. It was merely to indicate and
24 document that these are the three main softwood species
25 in the boreal forest in terms of industry demand and

1 these are also the species that were, in one instance
2 or another, artificially regenerated and, therefore,
3 there was a concern to know how much of that, whether
4 it came in naturally or artificially was there.

5 Q. Mr. Armson, again, you are not
6 answering to the question. I asked you: This appears
7 to increase the likelihood of regeneration work being
8 successful, but it raises the question of what the
9 results would have been if no regeneration work was
10 carried out; do you agree?

11 A. That is an inference. The data -- I
12 would stand by the data rather than drawing inferences
13 from it as you have in that question.

14 Q. Well, would the area have regenerated
15 naturally to produce sufficient target or desirable
16 species without the expenditure of funds?

17 A. I don't know since these plots were
18 put in areas where funds had been spent.

19 Q. Now, I understand - this is really
20 referring to your paragraph 53 - that growth data in
21 Document 27 are only for the target species?

22 A. That is correct.

23 Q. And while all the tree species were
24 measured, a complete analysis has not been made yet to
25 provide total growth per plot; is that right?

1 A. That's correct.

2 MR. CASTRILLI: Mr. Chairman, for the
3 record, I am referring to paragraph 53 at page 35 and
4 36 of what is now Exhibit 135.

5 THE CHAIRMAN: Thank you.

6 MR. CASTRILLI: Q. Now, we asked you in
7 an interrogatory, Mr. Armson, whether the complete
8 analysis on total growth per plot for all tree species
9 would be available by the time Panel 4 testifies.

10 Your answer was, no. Do you recall that?

11 MR. ARMSON: A. That is correct.

12 Q. Could you advise the Board when it
13 will be?

14 A. There are no plans to do that
15 complete analysis and if I may explain to the Board
16 why. This was a survey undertaken to give us some
17 statistical first basis.

18 And as I indicated to the Board in my
19 direct evidence there were two purposes. The first one
20 and the main one was to have this mensurational plot,
21 if you like, data available at the regional level too
22 and, therefore, to the districts and that there would
23 be a screening and undoubtedly at the local level there
24 would be particular interest in some of these plot data
25 and none in others for a variety of reasons.

1 And, therefore, as a rule we would not
2 generally undertake a complete amount of growth
3 analysis for all the plots. Undoubtedly some of them
4 will be analysed for specific reasons.

5 Q. Mr. Armson, I am curious as to how
6 you are characterizing the situation here. Paragraph
7 53 says very clearly:

8 "All tree species were measured, but a
9 complete analysis has not been made yet
10 to provide total growth per plot."

11 Now, I am a layman. Yet seems to me to
12 mean that sooner or later you will in fact be doing
13 such a complete analysis. Your testimony now is that
14 you are not?

15 A. It may be unfortunate the word yet
16 was there. We have not looked at all the data for all
17 the areas and looked at it in that sense and it may be
18 an unfortunate use of word and I apologize.

19 Q. But I am no longer clear. Is there
20 an intention by the Ministry ever to do the complete
21 analysis and produce it in report form, whether for
22 this forum or for any other forum?

23 A. At this stage I couldn't give a
24 categorical answer, but in my own opinion I would be
25 doubtful that we would want to analyse each and every

1 plot in the same manner for growth.

2 Q. I am just wondering. Why will it
3 take so long -- well, would you not want to analyse
4 data particularly on the growth of species other than
5 the target species?

6 A. Well, we may well wish to analyse
7 data on the growth of the other species in specific
8 areas for certain purposes.

9 Q. What would those purposes be?

10 A. They could be various ones. They
11 would relate to the stratification, if you will,
12 selection out of the plot for purposes that I can only
13 conjecture about now. I don't know that they would be
14 provincial-wide objectives in all cases.

15 Q. Sorry, I missed the last part of
16 that.

17 A. Well, you are asking me to conjecture
18 as to what would be the reasons, the specific reasons
19 why some of the data would be analysed and why -- or
20 why some of the plot data would be analysed and why
21 others would not, I think that's the gist of your
22 question.

23 And there could be a number of reasons
24 and, at this stage, I can only conjecture about those
25 reasons. For example, if you wish me to give an

1 example.

2 Q. I am prepared.

3 A. It may well be in a district, region
4 or unit that in looking at the plot data there are a
5 series of plots from white spruce plantations in which
6 also there is obviously less density of other
7 non-desirable species of a given age-class, and the
8 unit forester may well decide to look at that in terms
9 of whether some tending or maintenance treatment could
10 be justified in order to accelerate the growth of
11 existing spruce which was there or whether, in fact, he
12 should treat it more as a mixed wood stand and in fact
13 rely on the volume there of both the spruce and the
14 non-desirable species.

15 Now, in that case, there may be a need,
16 therefore, to look at it more closely and in fact look
17 at it in terms of the actual volumes that might be
18 represented on those particular areas. That's the kind
19 of thing that if I were at a local level would be
20 looking at.

21 Q. Mr. Armson, would it be fair to say
22 that the density of the non-desirable species is, if
23 the density is higher, their growth can be expected to
24 be higher as well?

25 A. Generally I would expect that

1 particularly with the poplar and the birch.

2 Q. Would it be embarrassing to the
3 Ministry if the volunteers did have better growth than
4 the planted species?

5 A. It wouldn't be a question of
6 embarrassment, it is a question of fact.

7 Q. But it is obviously is not what you
8 set out to do when you did the plantation; is that
9 right?

10 A. I think the data themselves clearly
11 illustrate that in many instances the working group
12 species was not achieved on the area at the time of the
13 survey.

14 Q. Which is all we have?

15 A. That's all I can speak to.

16 THE CHAIRMAN: Do you have any idea, Mr.
17 Armson, why it didn't work out as planned?

18 MR. ARMSON: I think that -- first of
19 all, you will notice I believe the data clearly show
20 that for jack pine the general level of - and this is
21 again the interpretative side - showing that there are
22 relatively larger proportions and larger numbers of
23 hectares that have come back into the jack pine working
24 group represents, in my experience - and I think this
25 is borne out by the fact that we, silviculturally, in

1 terms of regeneration on many of the areas that were
2 treated and we still treat - that we know how to
3 regenerate it both artificially and with other means
4 that have been mentioned already in terms of modified
5 harvesting practices.

6 With white spruce, we have had the
7 greatest difficulty and that relates, I believe, to the
8 predominance of white spruce in these mixed wood stands
9 where there have been, as a result of residuals, in the
10 early days the difficulty in site-preparation, and I
11 would also add in relation to something Mr. Gordon
12 alluded to earlier, that the transportation of bare
13 root nursery stock - and I had some considerable
14 knowlege of the nature of that stock - over long
15 distances in the 60s and early 70s before there was
16 really generally refrigerated transportation and
17 storage that this often gave rise to trees that were
18 green when they arrived at the planting site and were
19 planted but were physiologically not in a state to
20 survive.

21 And there are a host of factors of that
22 type that have given rise to either relative success,
23 if you will, or lack of that.

24 But generally speaking, yes, Mr.
25 Chairman, we have I think in the jack pine area a very

1 much more sophisticated development of our silviculture
2 treatments and less east in the spruce.

3 THE CHAIRMAN: Do you think that the
4 Ministry has a handle on the problems in the sense that
5 they would not reoccur, at least in the same
6 proportions?

7 MR. ARMSON: As I indicated in my
8 evidence, we still have a way to go in the upland
9 boreal mixed woods. The factors, however, are some
10 over which the Ministry has relatively little direct
11 control; increased utilization of the residual species,
12 particularly poplar and birch, the ability to get
13 effective equipment that can then deal with those areas
14 is one of key features tour.

15 They will probably in many situations
16 still become mixed wood stands but with a much higher
17 proportion of white spruce.

18 And if I might also go on in terms of
19 natural regeneration. The natural regeneration of
20 white spruce in these mixed wood stands is very much
21 dependent on seed source, and whereas both black spruce
22 and jack pine have cones which remain on the trees and
23 can provide seed over a period of years, and with white
24 spruce we are restrict exclusively to those particular
25 years when white spruce seeds and the white spruce

1 cones open and mature -- or mature and open and throw
2 their seed in a very short period of time.

3 So there is a much greater limitation on
4 the use of natural regeneration for white spruce than
5 there is with the other two species.

6 MR. CASTRILLI: Q. Mr. Armson, you
7 indicated you are doing -- that these tables indicate
8 you are doing better with jack pine but you have had
9 trouble with white spruce; is that correct?

10 MR. ARMSON: A. I believe that would be
11 the general conclusion.

12 Q. I ask you to turn to page 231. Do
13 you agree with me that on this page we are looking at
14 black spruce plantations for the three regions?

15 A. Yes.

16 Q. Can I ask you to look at the
17 non-desirable categories in each of those three tables.

18 A. Yes, I see them.

19 Q. Would you agree with me that the
20 numbers of non-desirable trees often exceed more than
21 one half the total density in this table as well?

22 A. That's correct.

23 Q. So it seems to me you are having
24 trouble in black spruce as well; is that right?

25 A. We had considerably more trouble with

1 black spruce than we are having right now and have had
2 for the last three years.

3 Q. Where is the evidence for that before
4 this Board?

5 A. I can only speak to the SOARS results
6 here and not to the other...

7 Q. You can only speak to the results we
8 have here and not to the results that we don't have,
9 but you do have?

10 A. I am pointing out that in my own
11 experience we have -- in fact in the days that we were
12 talking about here in terms of artificial regeneration
13 of black spruce, it was virtually all bare root stock,
14 virtually, not all, but by way the largest amount of
15 planting stock of black spruce that you put in the
16 ground now is container stock and the majority of that
17 stock has come in place since the private growers have
18 been involved and I believe that goes back to about
19 1982.

20 MR. GORDON: If I may add, Mr. Chairman,
21 it has been my experience having been in the field for
22 ten years that in that period of time I have seen and
23 participated in improvements.

24 I have seen improvements in
25 site-preparation techniques that allows because of the

1 array of site-preparation that is available to us now
2 to more closely match the site-preparation equipment to
3 the different sites we are dealing with.

4 And, therefore, before we plant an area
5 we will have more micro-sites available to plant that
6 area. So, therefore, we can initially establish a
7 greater number of trees. As well, the handling of that
8 stock, whether it be jack pine, white spruce or black
9 spruce has improved. We have refrigerated buildings
10 as opposed to old root cellars and, therefore, when the
11 stock goes in the ground it is of better quality.

12 As well, we have become more rigorous in
13 our control of the planting quality at the time of the
14 planting and, as well, we have at last one additional
15 chemical that I feel is really helpful, an herbicide
16 which I will simply call round-up.

17 And in the past where we planted white
18 spruce or black spruce on upland mixed wood sites we
19 were hoping that the stock was strong enough to make it
20 through on its own and now with this chemical we are
21 able to control the competition that now appears or has
22 been appearing on those sites and, therefore, there is
23 no question in my mind that the survival rates for such
24 species on such sites will be higher on the sites and
25 projects that Mr. Armson's surveyors looked at because

1 they didn't have such equipment and such herbicides
2 available to them.

3 Q. Gentlemen, that's all very nice but
4 none of that data is before this Board; is that
5 correct.

6 MR. GORDON: A. We have not presented
7 any such data, that's correct.

8 Q. Mr. Armson, while we are on the
9 subject of black spruce. Page 231 which has those
10 three tables are black spruce plantations, page 234 are
11 black spruce seedlings and would you agree with me,
12 once again, the non-desirables, the third column, the
13 third row, the numbers again often exceed by more than
14 one half the total density?

15 MR. ARMSON: A. I would agree.

16 Q. And the experience with jack pine has
17 been much more mixed, hasn't it, it has sort of been
18 all over the map in terms of the density vis-a-vis
19 non-desirables versus the planted?

20 A. Yes, it has been variable.

21 Q. Even in some cases in jack pine you
22 have had situations where the non-desirables have
23 exceeded the other categories by more than 50 per cent;
24 isn't that right?

25 A. That is correct.

1 Q. Now, I understand from your
2 testimony, Mr. Armson, that with respect to survey
3 plots they were separated into three major categories
4 and I am referring to, in particular, paragraph 55(a)
5 sub (ii) of your evidence?

6 A. That is correct.

7 MR. CASTRILLI: It is on page 36, Mr.
8 Chairman.

9 MR. ARMSON: Yes.

10 MR. CASTRILLI: Q. And these were areas
11 which were artificially regenerated and met free to
12 grow standards?

13 MR. ARMSON: A. That's correct.

14 Q. And they were further separated into
15 forest units of a mixture of two or more of the target
16 conifer species?

17 A. That's correct.

18 Q. Now, we asked you a further
19 interrogatory with respect to this matter and that
20 particular paragraph. We asked:

21 "Were the free to grow standards met by
22 the target conifer species or by the
23 target conifer species and other
24 species."

25 And your answer was:

1 "The survey applied the free to grow
2 criteria to the target species only."
3 Is that right?

4 A. That's right. And the word target on
5 page 36 of the evidence could also read desirable
6 because it could be one of the other -- in other words,
7 if it was planted to jack pine, in the sense used here,
8 two -- when it says here a mixture of two or more of
9 the other targets, that could be white spruce or black
10 spruce.

11 I am not confusing -- but the FTG
12 criteria applied to the desirable species, if you will.
13 In other words, it applied to one or more of the three
14 conifers. If it applied to only the "target" that was
15 planted there it would have come out in A1.

16 MRS. KOVEN: I am left with the
17 impression that jack pine is really, you know, the
18 overwhelmingly predominant species that you plant, is
19 that incorrect? In that it seems to be sort of an
20 errant species in that you plant a lot of it and it
21 shows up everywhere else as well.

22 MR. ARMSON: We can get the records, but
23 I think that currently the spruces would probably be...

24 MRS. KOVEN: Combined.

25 MR. ARMSON: White spruce has dropped --

1 yes, black spruce -- for the period 1977-1987 -- and
2 this is an interrogatory, Mr. Chairman, from the -- an
3 answer in response to an interrogatory from the
4 Canadian Association of Single Industry Towns and it is
5 their Question No. 2 and the question, if I may read
6 was:

7 "Can you give me any indication of the
8 Percentage breakdown by species of the
9 replanted areas in the last 10 years?"

10 So Ms. Koven in answer to that, for the
11 period 1977-1987 black spruce constituted 33 per cent;
12 white spruce 14 per cent; jack pine 31 per cent; and
13 white pine 7 per cent; red pine 7 per cent; and then
14 others 8 per cent.

15 So black spruce and jack pine about the
16 same, 33 and 31 per cent respectively and, therefore,
17 64 per cent or virtually two thirds.

18 MR. CASTRILLI: Mr. Chairman, for the
19 record, I think I would like to file our interrogatory
20 that Mr. Armson and I were discussing. (handed)

21 I ask it be made the next exhibit. It is
22 Question 19.

23 THE CHAIRMAN: Exhibit 173.

24 ---EXHIBIT NO. 173: Interrogatory Question No. 19
25 posed by CELA.

1 MR. CASTRILLI: Q. Now, your answer was
2 the survey applied the free to grow criteria to the
3 target species only.

4 Do you agree with me that this means that
5 this class must have regenerated to other than the
6 target species?

7 MR. ARMSON: A. This would have
8 regenerated to a mix in which the free to grow would
9 have applied to one of the other two species than the
10 one that was planted or seeded, correct.

11 Q. Thank you. So that is, these species
12 met the free to grow and stocking standards, but not
13 for the species seeded or planted; correct?

14 A. That is correct.

15 Q. And you would agree with me that this
16 indicates a silvicultural effectiveness failure as the
17 species planted was replaced naturally by another
18 species; is that right?

19 A. It might or it might not. I can't
20 give a categorical yes or no.

21 Q. Mr. Armson, I am going to take you
22 back to page 174 where we had this discussion
23 previously. It says:

24 "Quite clearly, this kind of situation
25 constitutes silvicultural effectiveness

1 failure."

2 A. I have to come back to the basic
3 point that we did not know the management objective,
4 and if I might give the Board an example of this.

5 It may well be that white spruce and jack
6 pine - and we have a number of plantations in this very
7 region of this type - were planted with the full
8 knowledge that in the first decade or more the jack
9 pine would outgrow the white spruce.

10 There would be some mortality, maybe more
11 than you would want, but there would be some mortality
12 in white spruce. But the management objective could
13 well be - and, in fact, I can think of some
14 plantations - where the white spruce was put in -- or
15 the jack pine was put in to provide some shelter and
16 protection, particularly from late spring or early
17 summer frosts.

18 The white spruce, therefore, is
19 underneath, it is dominated, if you will, by the jack
20 pine. If you were to put a plot in that stand you
21 would find that that would be a jack pine forest unit
22 or working group at 10 years or 15 or 20 years. But at
23 40 or 50 years, you would, in all probability, have a
24 mix of spruce and jack pine and it may well have
25 changed its condition.

1 Further, and there are again examples of
2 this, where it is put in to take out the jack pine or a
3 considerable part of that in an early thinning - and
4 Dr. Osborn referred very specifically to the use of
5 thinning, which is something we have not done because
6 we have relatively younger stands in northern Ontario -
7 it could well be that if the objective was to put in
8 the mix and take out the jack pine as a thinning at 30
9 years, that that stand at 40 or 50 would in fact be
10 either a spruce stand or certainly a much higher
11 proportion of spruce in it.

12 Those are the kinds of things that I have
13 in mind when I say I can't be sure. From the data
14 here, yes, they did not meet the objective of the white
15 spruce working group.

16 Q. Therefore, a silvicultural
17 effectiveness failure is indicated?

18 A. If that was the management objective.
19 And, as I said, I don't know what those management
20 objectives are and they may not have been well
21 specified.

22 Q. You planted one species and you got
23 another; isn't that the definition of silvicultural
24 ineffectiveness, effectiveness failure?

25 A. Not necessarily.

1 Q. Not necessarily, but that is what it
2 says on page 174; is that right?

3 I mean, you seem to be changing your
4 terminology as you go along, Mr. Armson. It is like
5 trying to pin jello to the wall.

6 THE CHAIRMAN: Well, now I am not sure
7 that is an apt analogy.

8 MR. ARMSON: Is that a question that you
9 wish me to answer?

10 THE CHAIRMAN: No, that was an editorial
11 comment.

12 Put your question, Mr. Castrilli.

13 MR. CASTRILLI: That is fine, Mr.
14 Chairman.

15 Q. The next question arises from a
16 further interrogatory which I am not sure we have to
17 actually file it.

18 I am referring to paragraph 55(a) on page
19 36. Can you advise the Board with respect to that
20 paragraph exactly which free to grow standards are
21 meant since the SOARS Study was done between 1984 and
22 '86?

23 MR. ARMSON: A. The free to grow
24 standards that were applied and, as I think I made
25 clear, in taking the individual plot data, the staff

1 had to make some judgments that they were applying as
2 near as they could the existing free to grow standards,
3 but the way in which the data was obtained didn't allow
4 them to check it off in a nice, neat, tidy manner.

5 It was essentially the free to grow
6 standards as they could apply them to their plot data.

7 Q. Well, what were the free to grow
8 standards for those areas?

9 A. Well, obviously, the free to grow
10 standards were based on a measure of height and on the
11 numbers, density stocking. The actual freedom from
12 competition, in terms of a visual assessment from just
13 looking at the plot data, wasn't there. So this is
14 where there was a measure of interpretation by the
15 staff.

16 If you look at a stand of trees in the
17 field you can measure heights and you can measure
18 density or stocking, and then you can visually assess,
19 in terms of the competing vegetation, what stage of
20 development it is at, whether it is below, even with,
21 or overtopping the trees that you are interested in.
22 In terms of the plot data, some of that information
23 would be there, but not all of it.

24 Q. Is there a document you are referring
25 to, or is it the document that Mr. Gordon referred to

1 earlier?

2 A. No. What I am saying is that the
3 staff, if you like, sorted the plots and their data on
4 the basis of height and stocking density. They
5 couldn't use what we would often use as a visual
6 assessment of a field situation, they had to go by the
7 actual numerical data on the sheets that they had.

8 Q. Just yes or no: Is there a document
9 that is in evidence that refers to the free to grow
10 standards that were used for these areas? Yes or no?

11 A. No.

12 Q. Thank you. Referring to paragraph
13 55(a) sub (iii), we asked you another interrogatory on
14 this and you gave the same answer as to our -- as to
15 what is now Exhibit 173. We asked:

16 "Were the free to grow standards met by
17 the target conifer species or by the
18 target conifer species, other species and
19 hardwoods?"

20 And your answer was the same as appears
21 in Exhibit 173:

22 "The survey applied the free to grow
23 criteria to the target species only."

24 Is that right?

25 A. That's right.

1 MR. FREIDIN: I am sorry, which
2 particular paragraph are you referring to?

3 MR. ARMSON: It could well be, if I may
4 Mr. Castrilli, that other species such as poplar or
5 birch also met the free to grow, but the question that
6 we were attempting to get at here, in terms of the
7 sorting: Did the three desirable species meet it.
8 Obviously it would be a mixed wood stand of some form.

9 MR. CASTRILLI: Q. Would you agree that
10 this means that the plantations must have met the
11 minimum stocking standards for the desired species and
12 are free to grow but are composed of a large number of
13 other species?

14 MR. ARMSON: A. That's correct.

15 Q. And would you agree that if the free
16 to grow species include other conifers and other
17 commercial species such as hardwoods, a further
18 silvicultural effectiveness failure is indicated as
19 described on page 174 of your evidence?

20 A. It certainly did not meet the target
21 units.

22 Q. The answer is yes?

23 A. Yes.

24 Q. Still on paragraph 55, I believe it
25 would be most appropriate to file the next

1 interrogatory. (Handed)

2 MR. CASTRILLI: Mr. Chairman, I ask this
3 be made the next exhibit.

4 THE CHAIRMAN: Exhibit 175.

5 ---EXHIBIT NO. 174: Interrogatory Question No. 21
6 posed by CELA.

7 MR. FREIDIN: What exhibit number, Mr.
8 Chairman?

9 THE CHAIRMAN: 175.

10 MR. FREIDIN: What was 174?

11 THE CHAIRMAN: Nothing. I made a
12 mistake, it is 174.

13 MR. CASTRILLI: You just want to get to
14 that one thousand.

15 THE CHAIRMAN: I want a party.

16 MR. CASTRILLI: Q. Mr. Armson, you have
17 probably had an opportunity to read this. I will just
18 read this quickly into the record. We asked with
19 respect to paragraph 55(b), (i) through -- sub (i)
20 through sub (iii):

21 "Were the free to grow standards met by
22 the target conifer species or by the
23 target conifer species, other species and
24 hardwoods?"

25 And we asked you to please advise whether

1 the areas were not free to grow and does this not,
2 therefore, indicate in the conclusion that the areas
3 were failures.

4 Your answer was:

5 "Areas as defined in paragraph 55(b) did
6 not meet free to grow standards for the
7 target species at the time of the survey;
8 however, the areas met the density
9 criteria..."

10 And you go on to indicate that:

11 "The assessment that a stand is not free
12 to grow at a given point in time does not
13 imply that it is a failure."

14 So it is fair to say, is it not, that
15 these areas were not free to grow for any of the three
16 target conifer species; is that correct?

17 MR. ARMSON: A. That is correct.

18 Q. And would you agree, therefore, that
19 a silvicultural effectiveness failure is indicated as
20 per page 174?

21 A. Yes.

22 Q. Would it be fair to say that if there
23 is eventual success in regenerating something but not
24 the target species, is that not a success of nature and
25 not necessarily MNR?

1 A. If nothing was done, yes.

2 Q. What do you mean if nothing was done?
3 Something was done?

4 A. Well, I would say that these -- if I
5 were a unit forester, it is the areas in this category
6 that I would look very specifically at for assessing
7 whether a tending treatment would be necessary.

8 Because obviously they indicate that the
9 species I am interested in, the two spruces or jack
10 pine, are there but they are not free to grow. And,
11 presumably, they are not free to grow because they
12 haven't met height or free from competition. And I
13 would look very closely at these for a subsequent
14 treatment, whether that would be worthwhile.

15 THE CHAIRMAN: When would you write-off
16 the total regeneration project as a total failure, when
17 everything that you attempted to do is absolutely dead?

18 And how does that work over a period of
19 time, since it is naturally regenerated?

20 MR. ARMSON: Well, in terms of the
21 investment, Mr. Chairman, yes, there are -- when they
22 all die or virtually there is not enough there to do
23 anything with, yes, I would say, yes, that is a failure
24 in terms of investment, no question about it.

25 MS. KOVEN: You wouldn't wait that long,

1 though. When do your investment plans for
2 regeneration, in fact finding out that something has
3 not reached free to grow category, you would leave that
4 behind, there are other investment choices that you
5 would make in terms of different areas, that wouldn't
6 be a priority in reinvesting in an area that had not
7 reached free to grow?

8 MR. ARMSON: That's right. There may in
9 fact be a very good reason why you have a total
10 failure. I mean, it is certainly not common, but it
11 can be that a series of circumstances - and that can be
12 entirely due to natural events - it could be a fire, it
13 could be a very serious drought period when immediately
14 following planting where you could lose virtually most
15 of your planted seedlings within a matter of a day or
16 two.

17 And that can happen and has happened, and
18 you may then say that area is too valuable to let go
19 so, in fact, you have made an investment and you have
20 lost it but you say I am going to reinvest. That is
21 the type of thing that can happen. It isn't a common
22 one but that can happen.

23 Where you lose them for reasons that,
24 shall I say, we can attribute back or one can attribute
25 back to a failure in what was done, then that is a much

1 more serious thing and, as I say, when those errors
2 occur it is incumbent on the professionals to take --
3 to learn from that one and to find out how to not make
4 the same mistake again.

5 MRS. KOVEN: I wasn't thinking of
6 catastrophic circumstances, I was thinking of what
7 might commonly happen and, that is, that you would have
8 a free to grow area and your assessment of it having
9 not reached free to grow would simply be that it was
10 slow, and you might wait over a period of time to look
11 at it.

12 So the investment wouldn't be made with
13 that discovery, the investment would be delayed in fact
14 and those dollars would go into another area for
15 addressing an event that needed taking care of right
16 then.

17 MR. ARMSON: That is correct. And,
18 again, an example that would come to mind is in areas
19 of black spruce where alder depending and the condition
20 that we can identify, is a natural part of it.

21 And there are many foresters who have
22 worked in the clay belt have said: If you establish
23 spruce under alder, you may have to wait 25 years or 20
24 years. The alder eventually dies out and the spruce
25 comes through but you are going to lose that amount of

1 time.

2 Your are quite right, Ms. Koven, in that
3 case you might lose your investment but it would
4 certainly be a much longer time and this is one of the
5 reasons why we do other treatments.

6 MRS. KOVEN: So in that case, free to
7 grow becomes a wait-and-see category?

8 MR. ARMSON: That's correct.

9 MRS. KOVEN: As opposed to a loss?

10 MR. ARMSON: That's correct.

11 MR. CASTRILLI. Q. Page 236 of your
12 evidence, the last three lines of the first full
13 paragraph.

14 MR. ARMSON: A. Yes, I see that.

15 Q. You say that:

16 "This type of result does not represent
17 an overall failure to regenerate an
18 area."

19 And you take the position that -- I
20 gather you take that position. Whether or not MNR had
21 anything to do with what grew there; is that right?

22 A. Yes, that's correct.

23 Q. So you may have success for the area
24 but not success for the plantation; is that right?

25 A. Correct.

1 Q. I refer you to paragraph 56(c) of
2 your evidence.

3 A. Yes, I see that.

4 Q. You state that:

5 "That overall about 20 per cent of the
6 artificially regenerated areas still do
7 not meet the criteria for inclusion as
8 part of the MAD base."

9 A. That is correct.

10 Q. Would you agree that that is a rather
11 optimistic way of reporting the results?

12 A. No, it is a statement of fact.

13 Q. It is a statement of fact. Would it
14 not be more accurate, more factually accurate to say
15 that 80 per cent of the 80 -- of the artificially
16 regenerated areas meet the criteria for the MAD base
17 but not necessarily for the targeted working group?

18 A. It could be put that way. I wanted
19 to highlight the proportion that did not meet the
20 criteria for inclusion.

21 Q. So your answer is yes?

22 A. Yes.

23 MR. CASTRILLI: Mr. Chairman, before I go
24 directly into the charts on this, it would be
25 appropriate to introduce the next exhibit or the next

1 interrogatory, I believe. You get to decide whether it
2 is an exhibit or not. (Handed)

3 Mr. Armson, I am referring to
4 Interrogatory 22.

5 MR. CASTRILLI: Mr. Chairman, I ask this
6 be made the next exhibit.

7 THE CHAIRMAN: Okay. I believe we are
8 now up to 175.

9 MR. CASTRILLI: (handed)

10 THE CHAIRMAN: Thank you.

11 ---EXHIBIT NO. 175: Interrogatory Question No. 22
12 posed by CELA.

13 MR. CASTRILLI: Q. Mr. Armson, we asked
14 in that question:

15 "What is the percentage of artificially
16 regenerated areas that meet the criteria
17 for inclusion in the MAD base in the same
18 working group as targeted for?"

19 And your answer was:

20 "At the point in time when the survey was
21 conducted, the percentages are those
22 shown in Document 27 on pages 238, 240,
23 242, 245 and 247, at the first row of
24 figures of Section I of the tables."

25 So if I understand that, only the first

1 row can be classified as satisfactory for the intended
2 working group, the other rows are not satisfactory for
3 the intended working group; is that right?

4 MR. ARMSON: A. That is correct.

5 Q. Thank you. Mr. Armson, just so I
6 understand the parameters of your evidence on this
7 point, I would like to refer you, as an example, to
8 page 240.

9 Here we are looking at a series of tables
10 on planted black spruce.

11 A. Yes.

12 Q. Would you look under the first box on
13 that page which has the Roman numeral I, and you
14 indicate there the per cent of area that may be
15 included in the MAD land base; is that right?

16 A. That's correct.

17 Q. The first row of numbers indicates
18 spruce stands that are free to grow and included in the
19 MAD base; is that right?

20 A. That is correct, black spruce
21 actually.

22 Q. Black spruce, that's right.

23 A. Yes.

24 Q. And that is 3 per cent, 9 per cent
25 and 11 per cent; is that right?

1 A. That is correct.

2 Q. The second row of numbers under the
3 mixed conifer heading are 4 per cent, 9 per cent and 15
4 per cent; is that right?

5 A. That is correct.

6 Q. And those indicate areas planted to
7 black spruce but included in the MAD as enough black
8 spruce and/or jack pine and white pine came in
9 naturally; is that right?

10 A. The jack pine and white spruce.

11 Q. White spruce, excuse me. Is that
12 right?

13 A. That's right.

14 Q. So in this category or that row they
15 were successful but not necessarily to the target
16 species that was planted; is that right?

17 A. That is correct.

18 Q. The third row, mixed conifer and
19 hardwood, and the numbers are 11 per cent, 17 per cent
20 and 50 per cent for the three regions, indicates areas
21 planted to black spruce but included in the MAD base as
22 enough black spruce and/or jack pine or white spruce,
23 balsam fir, white birch or poplar came in naturally; is
24 that right?

25 A. That's correct.

1 Q. Now, in your evidence you did not
2 state which free to grow standards you used, but in
3 response to one of our interrogatories you indicated
4 that you used black spruce; is that right?

5 A. It would have been used, yes, with
6 respect to the black spruce data.

7 Q. Would it be fair to say, Mr. Armson,
8 that this means that the plantations must have met the
9 minimum stocking standards for the target or planted
10 species and are free to grow but are composed of a
11 larger number of other species that were classified in
12 another working group than black spruce?

13 A. Yes, that would be the fact.

14 Q. That's correct?

15 A. I believe so.

16 Q. And would it be fair to say that the
17 areas would be regenerated with at least enough spruce
18 to meet the standards but not enough spruce to classify
19 it as the spruce working group?

20 A. That's correct.

21 Q. So, for example, it could be poplar,
22 white birch, balsam fir or jack pine; is that right?

23 A. That's right, those would be the
24 other species.

25 Q. Just to summarize the Section I at

1 the top table on the page of 240. This section shows
2 that only the first row of numbers; i.e., 3 per cent, 9
3 per cent, 11 per cent, represent the percentage of area
4 that actually obtained free to grow standards for the
5 target species because that is what was planted for; is
6 that right?

7 A. That's correct.

8 Q. Would you agree with me that 3 per
9 cent, 9 per cent and 11 per cent represent the success
10 of the plantations?

11 A. They represent the numbers, they are
12 very low numbers.

13 Q. Do they represent the success of the
14 plantations?

15 A. As I indicated, success can be
16 measured -- if you want to use the word success, I
17 suppose that is lack of success.

18 Q. Moving to the second box on the page,
19 Roman numeral II. Just so that I am clear that I
20 understand what is at work there.

21 This is the section that shows the
22 percentages of black spruce plantations that are
23 stocked enough, not necessarily to black spruce, but
24 are not free to grow particularly for the three conifer
25 species; is that right?

1 A. This would be for the black spruce.

2 Q. That's right. I understand that MNR
3 is including these in the inventory; is that right?

4 A. Yes.

5 Q. And would you agree with me that
6 these areas to be included in the inventory must be
7 free to grow for species other than the target species?

8 A. That's correct.

9 Q. And that leaves only the hardwoods,
10 the poplar and the white birch; is that right?

11 A. Jack pine and black spruce could be
12 there.

13 Q. Jack pine?

14 A. Pardon me, white spruce, but jack
15 pine, in fact there is one -- in this particular
16 instance they identify jack pine specifically.

17 Q. Referring to the third and fourth
18 columns of what is Roman numeral II, the middle box on
19 the page.

20 A. Yes.

21 Q. It is the 11 -- mixed conifer, 11 per
22 cent, 11 per cent, 2 per cent and the final column
23 mixed conifer and hardwood 41 per cent, 27 per cent and
24 8 per cent.

25 These rows indicate that these areas were

1 planted to black spruce but are not free to grow for
2 black spruce; is that right?

3 A. That is correct.

4 Q. But they do have enough hardwood that
5 is free to grow to be included in the inventory--

6 A. Yes.

7 Q. --MAD base as poplar or white birch
8 stands; is that right?

9 A. And other conifers than black spruce.

10 Q. Can you confirm for me that with
11 respect to this middle box on the page, at the first
12 row spruce, indicates that 1 per cent of the northern
13 region is stocked to black spruce but not free to grow?

14 A. That is what that number states, yes
15 -- or represents.

16 Q. The second row, Section II on that
17 same page 240 indicates that 1 per cent of the
18 northcentral region was planted to black spruce but
19 regenerated to jack pine; that is, sufficiently stocked
20 but not free to grow?

21 A. That's correct.

22 Q. It is probably overtopped by
23 hardwoods?

24 A. Could well be.

25 Q. Section III, on page 240, indicates

1 areas planted to black spruce but which do not have
2 enough softwoods or hardwoods that are free to grow to
3 be included in the inventory; is that right?

4 A. That's correct.

5 Q. Mr. Armson, these are definite
6 failures, aren't they?

7 A. These are from the plotted data, yes.

8 Q. Is your answer yes to my question,
9 these are definite failures?

10 A. Oh, fail ---I am sorry, I thought you
11 said these are definite values. These are areas that
12 at the time are not meeting the criteria, either of
13 density. If that is a definition of failure, then so
14 be it. I think I made it clear that this is a
15 measurement at one period in time.

16 THE CHAIRMAN: Gentlemen, I do not think
17 you have to rehash what Mr. Armson means by failure and
18 what you mean by failure and what these data mean by
19 failure.

20 MR. CASTRILLI: I wouldn't.

21 THE CHAIRMAN: The Board should probably
22 have its own definition of what is meant by failure.

23 MR. CASTRILLI: I wouldn't think of it.

24 MR. CASTRILLI: Q. Mr. Armson, just to
25 summarize on this table, then.

1 Can you confirm that the only area that
2 appears to be successfully regenerated to the species
3 planted are the percentages indicated in the first low
4 of section Roman numeral I; i.e., 3 per cent, 9 per
5 cent and 11 per cent?

6 MR. ARMSON: A. Yes, and that would
7 apply to all the other tables of the same format.

8 Q. Yes, that's right. I don't intend to
9 go through the other tables. Can I refer you to
10 paragraph 58 of your evidence, page 38.

11 A. Yes, I have that.

12 Q. You note there that:

13 "The use of the term untreatable in the
14 late 1970s was an unfortunate one with
15 respect to whether an area harvested
16 remained unregenerated."

17 And that's actually under Roman numeral
18 small (i); is that right?

19 A. That's correct.

20 Q. Would you confirm for me that the
21 untreatable areas have regenerated naturally?

22 A. That would be my observation.

23 Q. That was also an answer you gave in
24 an interrogatory; is that right--

25 A. Yes.

1 Q. --that we asked? Your answer is yes?

2 A. That is my observation from many
3 areas I have seen.

4 MR. CASTRILLI: Mr. Chairman, I don't
5 believe it is necessary to file this one.

6 Q. Mr. Armson, could you advise the
7 Board what the rotation is for these formally
8 untreatable areas?

9 MR. ARMSON: A. No, I cannot.

10 Q. Can you advise the Board as to how
11 much of the cutting of these areas was planned before
12 the harvest to obtain natural regeneration as opposed
13 to just harvesting the area and waiting for natural
14 regeneration?

15 A. I cannot.

16 Q. Still on page 58 -- paragraph 58 of
17 your evidence. I understand that your testimony is
18 that there is more control in achieving the desired
19 species when an area receives a regeneration treatment;
20 is that right?

21 A. That is the purpose of the
22 regeneration treatment.

23 Q. You would agree with me, though, that
24 the results of the SOARS project indicate the poor
25 results achieved for obtaining the target species; is

1 that right?

2 A. Yes, I do.

3 Q. And we have no evidence before us on
4 the state of regeneration on areas that regenerated
5 naturally without an MNR regeneration treatment; is
6 that right?

7 A. That is correct.

8 Q. Would it be fair to say that to be
9 able to make the statement you make at page 39 of your
10 evidence MNR would have to show that the artificial
11 regeneration effort has obtained better quality and
12 quantity stands that those regenerated naturally?

13 A. The statement is on page 39?

14 Q. Yes, it is the last paragraph --
15 sorry, it is not the last paragraph, it is the last
16 paragraph under that heading -- sorry, it is the first
17 full paragraph on that page.

18 A. Yes, I have it.

19 Q. Sorry, would you like me to repeat
20 the question?

21 A. Yes, if you would, please, and then I
22 can follow it along.

23 Q. Surely. Would it be fair to say that
24 to be able to make the statement you make there, I am
25 particularly referring to:

1 "There is more control in achieving the
2 desired species composition when an area
3 receives a regeneration treatment."

4 MNR would have to know that the
5 artificial regeneration effort has obtained better
6 quality and quantity stands than those regenerated
7 naturally; is that right?

8 A. It would be based on that
9 understanding and a knowledge, yes.

10 Q. And you have not done this in your
11 evidence, as you have presented no data on the state
12 and species composition of naturally regenerated
13 stands; is that right?

14 A. No, I am basing it on considerable
15 experience and observation, my own, and drawing upon
16 others.

17 Q. Sorry, you are not listening to the
18 question. There is no evidence before this Board, no
19 data before this Board on the state and species
20 composition of naturally regenerated stands; is that
21 right?

22 A. That's correct.

23 Q. Thank you.

24 MR. GORDON: A. If I could add, for the
25 Board's information, although I can't specifically say

1 what percentage, the NSR surveys include a significant
2 component of untreated lands and while I can't say what
3 percentage, there is no question that because of the
4 level of artificial regeneration treatment that has
5 taken place historically; i.e., in the 70s and 60s, it
6 was relatively low.

7 A sizable component of the NSR survey
8 area, the 1.5-million hectares would be on treated
9 lands.

10 Q. Mr. Armson, with respect to the
11 overall conclusions to be drawn from the SOARS Survey,
12 would it be fair to say that the Ministry has used a
13 complex procedure to classify the areas surveyed?

14 MR. ARMSON: A. With respect to the
15 SOARS?

16 Q. Yes.

17 A. In respect to the survey itself, no.
18 With respect to the second part, and if you are
19 referring to those -- the second set of data, as I
20 indicated to the Board, those plot data were assessed
21 or interpreted into those categories at the request of
22 senior management of the Ministry.

23 The survey was not undertaken to put them
24 into that and it perhaps appears a little bit
25 complicated for that reason.

1 Q. Now, Mr. Armson, on page 37,
2 paragraph 56(c) you speak to the conclusions, that the
3 survey report -- you say -- or one reading the survey
4 report you should draw, and you say that all overall in
5 paragraph (c):

6 "20 per cent of the artificially
7 regenerated areas still do not meet
8 criteria for inclusion as part the MAD
9 base."

10 A. Yes.

11 Q. Isn't that leaving the impression
12 that the overall success rate was fairly high?

13 A. No, it was just a straightforward
14 statement. The first question originally asked: How
15 much of the area that was treated actually came back
16 into the production forest into that MAD base, and that
17 clearly identifies that proportion that didn't.

18 Q. Well, the proportion that did is 80
19 per cent; isn't it?

20 A. Yes.

21 Q. 80 per cent is pretty high; isn't it?

22 A. Yes. And, as I pointed out, I made
23 it clear that I wanted to highlight the proportion that
24 didn't come back.

25 Q. That is right. By inference you have

1 suggested that one should draw the conclusion that the
2 success rate was fairly high; i.e., approximately 80
3 per cent?

4 A. I don't think I used the word success
5 in there.

6 Q. You weren't trying to leave the
7 impression that success was what you meant by paragraph
8 56(c)?

9 A. No, paragraph 56(c) specifically
10 identifies three -- in three statements there, the last
11 one about the 20 per cent that doesn't come back into
12 the production forest.

13 THE CHAIRMAN: Mr. Castrilli, I think you
14 have made your point. The Board will read it both
15 ways, and you have explained how it could be
16 interpreted the other way.

17 MR. CASTRILLI: That's fine, Mr.
18 Chairman.

19 Mr. Chairman, I am wondering if this
20 might not be an appropriate place for a break because I
21 am going to proceed to another major area.

22 THE CHAIRMAN: Very well. We will take
23 20 minutes.

24 Thank you.

25 ---Recess taken at 3:25 p.m.

1 ---Upon resuming at 3:45 p.m.

2 THE CHAIRMAN: Thank you, please be
3 seated.

4 Mr. Castrilli, we are proposing to end
5 around five.

6 MR. CASTRILLI: Mr. Chairman, with any
7 luck I might actually be very close to finishing by
8 then. If not, I would not be very long tomorrow
9 morning, as long as the microphone cooperates.

10 Q. Mr. Armson, continuing with you. Is
11 it fair to say that instead of measuring success in
12 terms of obtaining the desired species; that is, the
13 one planted or seeded for, the Ministry has classed
14 areas as being suitable if they can be included in the
15 land base regardless of species?

16 MR. ARMSON: A. In this document? Are
17 you referring to this...

18 Q. SOARS.

19 A. Only the SOARS. There are three
20 distinctions and one of them is that which is in the
21 land base, the inventory land base and that which is
22 not, that's correct, independent of the species.

23 Q. So it is success for the area rather
24 than success for the plantation; is that right?

25 A. No, I thought the tabular data

1 clearly demarcated those distinctions.

2 Q. Let me give you an example. An area
3 planted to black spruce is still acceptable to the
4 Ministry even it is classed as free to grow for poplar;
5 is that correct?

6 A. No, it merely says that that would be
7 in the --

8 Q. In the MAD base.

9 A. For poplar.

10 Q. Dr. Osborn, I understand from your
11 testimony on August 10th, I believe you indicated that
12 the simulation model is industrial demand driven?

13 DR. OSBORN: A. Yes.

14 Q. The overall objective was to satisfy
15 mill door requirements; is that right?

16 A. Correct.

17 Q. The models are -- this is a OWOSFOP
18 for Production Policy that we are referring to?

19 A. Correct.

20 Q. And it concentrates on satisfying one
21 user of the forest, the industry; is that right?

22 A. That is correct.

23 Q. And is it fair to say that there is
24 nothing in those models that refers to the impact on
25 other users of the forest, they are not dealt with --

1 that is not dealt with in the scenarios?

2 A. Correct.

3 Q. I also understand or recall from your
4 evidence on August 10th, Dr. Osborn, that you testified
5 that the OWOSFOP for Production Policy has nothing -- I
6 believe you used the term -- has nothing to do, or
7 nothing in it about geography and I believe you said
8 that transportation distance was no obstacle; is that
9 right?

10 A. I am not sure of the exact words I
11 used, Mr. Castrilli.

12 The analysis which were presented were by
13 planning regions, northwest, northeastern and the
14 assumption within running those analyses for those
15 regions was that wood was equally available as far as
16 the model was concerned within the region.

17 With one caveat, and that was that there
18 was an allowance for inoperable areas, which was
19 explained by Mr. Gordon, as to the magnitude of that
20 allowance which was a partial expression of
21 geographical distance from mill to where the wood was.

22 Q. But by and large, with that one
23 exception, transportation distance was no obstacle; is
24 that a fair statement?

25 A. Correct.

1 Q. Thank you. Can the Board take it
2 that the five scenarios appear to consider that timber
3 will come from anywhere in northern Ontario to satisfy
4 the demand of a particular mill?

5 A. Don't try and put words in my mouth,
6 Mr. Castrilli.

7 The models clearly show that within the
8 way the model was run the wood supply in any of the
9 regions was presumed to be equally available to
10 wherever the mills were within that planning region.

11 Q. So it is not northern Ontario, it is
12 within the planning region?

13 A. that is the way the analyses were
14 originally run, that is the way Mr. Gordon described
15 the analyses were run, but the results that were
16 presented, as he explained, were put together.

17 Q. Let me ask you the question this way
18 then: The five scenarios appear to consider the timber
19 will come from anywhere in a planning region to satisfy
20 the demand of any particular mill; is that correct?

21 A. To satisfy the set of demands for the
22 mills in totality within that planning region to meet
23 the mill demand.

24 Q. So the answer to my question is yes?

25 A. In that context, yes.

1 Q. You would agree that, in practice,
2 transportation costs would make that assumption
3 unrealistic?

4 A. It was fully explained in the
5 assumptions of what was in the model, what wasn't in
6 the model. It was also fully explained that there are
7 other factors not taken cognizance of in the model,
8 including transportation costs, market prices and a
9 whole range of other factors.

10 That was clearly explained that it was
11 not built into the way the models were run.

12 Q. So the answer to my question is yes?

13 A. If you would rephrase the question,
14 please.

15 Q. I will repeat the question. In
16 practice, transportation costs would make that
17 assumption unrealistic; is that right?

18 A. In practice, transportation costs
19 will have a bearing upon the reality of the wood being
20 delivered in the time frame shown in the model.
21 Whether it is unrealistic or not is an unknown the way
22 the model was run, sir.

23 MR. CASTRILLI: Mr. Chairman, moving on
24 to my last interrogatory. This is referring to
25 paragraph 77 of the evidence. It is interrogatory No.

1 26.

2 Can I ask that it be made the next
3 exhibit.

4 THE CHAIRMAN: Exhibit 176.

5
6 ---EXHIBIT NO. 176: Interrogatory Question No. 26
posed by CELA.

7 MR. CASTRILLI: Q. I will just read it
8 quickly into the record. We asked for the
9 literature -- sorry, I am referring to paragraph 77,
10 page 43. We asked:

11 "What is the literature that was used to
12 estimate the yields for the model..."

13 And we asked for references or copies if
14 they were available. And your answer was:

15 "The model's yield curves for the old
16 forest are based on the volume data
17 within the existing FRI information base.
18 The new forest yield curves, as described
19 in Document No. 42, were based on a
20 number of professional assumptions, for
21 example, stocking levels and Plonski's
22 normal yield tables. The resultant
23 curves were compared with available
24 literature and found to be reasonable.
25 No formal reference listing was

1 developed."

2 Can I ask you, Dr. Osborn, what was the
3 available literature you compared the resultant curves
4 to to make your determination that they were
5 reasonable?

6 DR. OSBORN: A. I am not personally
7 aware, Mr. Castrilli. Dr. Mervert, the mensurationist,
8 the forest mensurationist in Timber Sales Branch was
9 the person who was assigned that task back in the 1982
10 analysis.

11 He was asked to come up with the new
12 forest Level 3 which was the plantation curves
13 particularly because that was the one in which we
14 thought we might find some available literature.

15 Mr. Mervert came up with those estimates
16 and he, as far as was asked, looked at that which he
17 could lay hands on. Now, from personal experience
18 there is very little plantation yield table data of any
19 great length, certainly in Ontario and even in the lake
20 States and if there is in the lake States, it is
21 primarily red pine. And we have explained that red
22 pine is not a dominant species in the area of concern,
23 the northern part of the Ontario.

24 So although useful to corroborate and we
25 have looked at red pine data in Panel 3, all it did was

1 indicate that the estimates we used and the procedures
2 we followed seemed to be realistic.

3 I do not have a list of literature, per
4 se.

5 Q. I am wondering if I could ask you to
6 just make whatever inquiries you can to recollect and
7 determine the more pertinent references. You can give
8 me an informal list, if you like.

9 A. Certainly.

10 Q. Thank you.

11 MR. CAMPBELL: Mr. Chairman, I am not
12 sure what the practice is with regard to whether
13 undertaking answers are being provided to other
14 parties, whether that was within that.

15 I would ask that we be provided with the
16 copy of the material as well.

17 THE CHAIRMAN: As I understand it,
18 correct me if I am wrong, but the undertakings -- the
19 answers to various undertakings given to specific
20 parties would certainly be given to the party
21 requesting it and to any of the other parties, if so
22 requested. Was that not the way it was left?

23 MR. FREIDIN: To be quite frank, Mr.
24 Chairman, I asked Mr. Castrilli--

25 THE CHAIRMAN: Or did we not deal with

1 that?

2 MR. FREIDIN: --from time to time and he
3 asks me from time to time. Sometimes it gets difficult
4 to remember exactly what was decided on and then
5 changes along the way. But I have no problem making
6 the answer to this undertaking available to Mr.
7 Campbell or any of the other people here.

8 THE CHAIRMAN: Why don't we do it on this
9 basis, and Mr. Tuer, I will ask for your comments in a
10 moment.

11 If we made the answers to the various
12 undertakings available to the parties who are present
13 at the hearing on a full-time basis and then, if any
14 other parties request that information, having looked
15 at the transcripts and seeing that there is some
16 information that they could otherwise obtain, that upon
17 request that information be available to the requesting
18 parties.

19 Otherwise I think it is going to be an an
20 onerous task for parties providing that kind of
21 information to ship it around the whole province to all
22 of the full-time party list, or the list of the people
23 receiving full-time correspondence.

24 Secondly, some of this information will be
25 available in only one copy. If you are going to be

1 producing something like a report or something like
2 that that is an older one, it may only be available in
3 one copy and I am not sure that everybody here would,
4 by necessity, need a copy of their own.

5 And if a problem like that arises, I
6 guess the parties could decide amongst themselves how
7 they can obtain that data. In some cases it could be
8 photocopied, in other cases it could be borrowed or
9 whatever. If you have a further problem with that
10 speak to the Board and we will work something out.

11 Mr. Tuer, do you have something to add to
12 that?

13 MR. TUER: After what you have said, Mr.
14 Chairman, I am content.

15 THE CHAIRMAN: Thank you.

16 MR. FREIDIN: I think there was one
17 ruling that wasn't made that I think I would ask to be
18 continued and that is that the request be put in
19 writing, or what the understanding is understood to be
20 to be put in writing and put in writing by the person
21 asking for the undertaking.

22 THE CHAIRMAN: To the party who is going
23 to fulfill it?

24 MR. FREIDIN: Yes.

25 THE CHAIRMAN: I think that is

1 preferable, then there will not be a misunderstanding
2 later on when the material comes forward.

3 I might also add that the Board is not
4 necessarily tracking whether or not these undertakings
5 are being fulfilled. Basically we are leaving it to
6 the party who requested the information to assure
7 themselves that they are receiving that information.

8 If they are not, we are assuming that
9 those parties will speak to the Board at a future time
10 and say that this particular undertaking has not been
11 fulfilled and we will deal with it at that time.

12 MR. CASTRILLI: Mr. Chairman, I am glad
13 you mentioned that. There is a matter that was dealt
14 with in Panel 3 that I have not received yet. I asked
15 Mr. Armson in Panel 3 for the copy of the 1976 Forest
16 Production Policy which he references in his Panel 2
17 evidence and I have been advised informally by Mr.
18 Freidin that it cannot be found. I again, with
19 respect, find that difficult to believe.

20 And I would ask that all relevant
21 inquiries be made to obtain that document including the
22 MNR library if necessary.

23 MR. FREIDIN: I will undertake subject to
24 being along the lines of the other day to make another
25 review to see if that document can be located.

1 THE CHAIRMAN: Very well.

2 DR. OSBORN: Mr. Chairman, if I can
3 continue for just a moment with this particular request
4 which I will certainly comply with with Dr. Mervert.

5 And, I would like to make it clear to the
6 Board and in this case to counsel that the explanation
7 of those yield curves was very much explained and
8 presented on 279 and 280 of the evidence. It was
9 driven very much by that explanation, and the
10 literature that Mr. Castrilli is chasing is primarily
11 that which may or may not, if you like, be compared
12 with.

13 But the model and the assumptions in
14 those curves was very much that as described already in
15 the evidence; i.e., any experts Mr. Castrilli wishes to
16 show that to, have the numbers and the data already in
17 front of them with which to ascertain do they or do
18 they not believe that those values make sense.

19 MR. CASTRILLI: That's fine. But in Dr.
20 Osborn's answer he has referred to available literature
21 and I have yet to know what it is. But I understand I
22 have an undertaking from him to make the inquiries and
23 I am content with that.

24 Q. Dr. Osborn, the SOARS Survey
25 indicates that we expect more hardwood on the conifer

1 plantation areas than desired. Where was allowance
2 made in the model for the amount of hardwood that was
3 produced where softwood was intended?

4 DR. OSBORN: A. At this point in time,
5 there isn't an allowance as was explained, it was the
6 softwood coertype and the intolerant hardwood
7 coertype in totality that was modeled as coertypes,
8 working groups.

9 It was also fully explained that in the
10 assumptions in the yield curves, that the species
11 composition was assumed to be that of the softkwood
12 coertype or the softwood coertype.

13 So that assumption is not inherently
14 within there, with the exception of looking at the
15 results of, for example, Scenario 3 and Scenario 5
16 where, if you look at the implications of what those
17 two scenarios mean: The ability to utilize the
18 intolerant hardwood rather makes that concern about the
19 proportionality of what species is coming back into
20 regen today perhaps less of a concern.

21 Now, with a complete caveat that Scenario
22 No. 3, Scenario No. 5 makes sense through time.

23 Inherently in the way the model was run
24 your question was not spoken to.

25 Q. I understand from your testimony that

1 in the model's analyses the harvest rate is controlled
2 by demand not by the MAD; is that correct?

3 A. Yes. I wouldn't have used those
4 words. The model is driven by demand, demand is taken.
5 It is not so much a matter of control, you take it, you
6 deplete it, and MAD is calculated. As I explicitly
7 stated it was not in any way, shape or form used to
8 control the way the model was run.

9 Q. Paragraph 79 page 44, the last
10 sentence.

11 "In these analyses, the harvest rate is
12 controlled by demand not by MAD."

13 A. Fair enough. Understand I didn't
14 write those words. I wouldn't have used the word
15 control, but it is a matter of semantics.

16 Q. Sorry, this is not your part of the
17 evidence?

18 A. I didn't write those words.

19 Q. Who wrote those words?

20 MR. GORDON: A. I did.

21 Q. In any event, the answer to my
22 question is yes?

23 DR. OSBORN: A. Yes, without worrying
24 about semantics.

25 Q. Thank you. So would it be fair to

1 say that the simulations assume that the northern
2 Ontario planning regions as a whole are providing the
3 sustained yield for the province?

4 A. The simple answer to your question is
5 no. The models were run for the two planning regions
6 describing the four northern regions of Ontario, not
7 the whole province. The demand that was coming out of
8 those models for those two planning regions was the
9 demand as presumed to be required from those two
10 planning regions.

11 Q. I am sorry. Then, let me rephrase
12 the question.

13 A. That is why I caught you.

14 Q. The simulations assume that the
15 northern Ontario planning regions as a whole are
16 providing sustained yield for those northern Ontario
17 planning regions; is that correct?

18 A. No, that is not also true either.

19 Q. I didn't think so. What is the right
20 answer?

21 A. I'm not very much clear what the right
22 question was too. And the reason I say no, Mr.
23 Castrilli, is because scenario No. 2 quite clearly
24 shows that in fact, over time, if it was run with all
25 the assumptions inherently within it and all the

1 assumptions in the model, the wood supply disappears
2 and we have explained in Panel 3 that that wasn't what
3 sustained yield was all about.

4 So the five scenarios do not show
5 sustained yield.

6 Q. Would it be fair to say that the
7 harvest rate could exceed the MAD--

8 A. Yes.

9 Q. --for a particular management unit at
10 any point in time?

11 A. You asked me this question in Panel 3
12 and I haven't changed my mind, yes.

13 Q. I am speaking now in the context of
14 the simulations which were not --

15 A. In the simulations in Panel 4, yes.
16 the answer is still the same, sir.

17 Q. Would you agree that the sustained
18 yield of the management units will not be able to be
19 practiced if the models' scenarios are applied in real
20 life?

21 A. We explained this very carefully that
22 this is not what is done at the management unit level,
23 we explained very carefully this is not how yield
24 control is practiced and we explained very carefully
25 that these were simulations to look at a potential wood

1 supply under certain assumptions to investigate the
2 relationships between silviculture input and different
3 forms of depletion.

4 They were categorically not examples of
5 what yield control is all about. There is a complete
6 and utter distinct difference.

7 So, if we were to run these at the
8 management unit level, which is what I am hearing you
9 sort of infer, they could be run as simulation models
10 fully understanding that yield control inherently
11 wasn't in there, in the simulation, or they could be
12 run with maximum allowable depletion as control. It
13 could be done either way. You can change the computer
14 program to bring in that as a fact of life, in which
15 case the results will look different, there is no doubt
16 about it under some circumstances, and especially at
17 the management unit level.

18 Q. Let me ask you this: Would it be
19 fair to say that by cutting the older age-classes
20 first, as the model assumes, this will concentrate the
21 harvesting in management units with the largest amounts
22 of older age-classes. Is that a fair assumption?

23 A. Within the way the model is run with
24 the data aggregated for the whole of the planning
25 region, yes.

1 Q. And under this scenario when older
2 age-classes were depleted from a particular 23
3 management unit after a period of harvesting, would
4 more of the harvesting switch to other management
5 units?

6 A. The model is not run by management
7 unit. The management unit boundary, the management
8 unit data sets absolutely disappear in the way the
9 model is run. We now have a management unit that is a
10 planning region, the old management unit boundaries on
11 the map of the province have disappeared. They are now
12 no longer an entity of any concern in the way the model
13 is run.

14 Q. Well, assume we still have at least
15 two planning regions in your scenario. There are all
16 being -- if one was all being harvested at the same
17 time for an older age-classes, would it not eventually
18 be the case that the cutting would have to switch to
19 the other planning regions?

20 A. Yes, if the age-class distribution
21 was all of the old in one of the planning regions and
22 all of the young in the other planning region, but that
23 is not the case. Both of them have a mix of old and
24 new. The analyses were done for the two separately.
25 Separately the two were cut from the oldest. So the

1 scenario you are describing, the hypothesis you are
2 describing just doesn't exist, even in the model.

3 Q. Well, wait a minute now. If we were
4 to run this scenario or this model on a series of
5 management units as, opposed to just the planning
6 region you did, and we accept your assumption which
7 appears at page 281 of Document 43, you cut the older
8 age-classes first -- you do recall writing that?

9 MR. GORDON: A. I wrote that.

10 Q. Would you not agree that there is
11 eventually going to be switching and varying of the
12 harvest level in a management unit?

13 DR. OSBORN: A. No, Mr. Castrilli. If
14 you ran it at the management unit level, if you ran
15 this kind of model at the management unit level, each
16 and every management unit would have its own separate
17 run for softwood. You would run that unit and if you
18 run it the same way as you are running your simulation,
19 you would cut in the softwood working group the old
20 softwood trees in that unit all the way through to the
21 young ones in the old forest and then in that unit
22 still you would cut the new forest.

23 Now, if, for example, the mill demand in
24 that particular unit, the demand, was to exceed what
25 the unit could produce - this is one reason it wasn't

1 done this way - we would switch into the complexities
2 of what was described in Panel 3 by Mr. Armson for the
3 ability to move wood to and fro between units.

4 And one of the reasons the model is not
5 run at the management unit level is the complexities of
6 trying to run a hundred units and every five years a
7 possibility of moving wood to and fro, as happens in
8 real life, the complexity of trying to model that at
9 the moment is beyond our way of doing business, in
10 comprehension that is not quite true.

11 So to simplify the situation, present the
12 model, we did it at a planning region. It could be run
13 at the unit level, in which case a whole host of
14 assumptions would have to be thought about and
15 potentially changed and it becomes that much more
16 complicated.

17 Q. Let me ask you this, this is all very
18 curious. Are the management units going to provide a
19 predictable and continuous supply of wood as determined
20 by the MAD calculations and, at the same time, as
21 calculated by the OWOSFOP for production policies; is
22 that the evidence you are giving?

23 A. No.

24 Q. Would you agree with me that the
25 method of trying to run the province on a sustained

1 yield basis - which is what I think is going on with
2 the planning regions in your simulations - would
3 contradict the statement made in your Panel 3 evidence
4 which is at page 20, paragraph 8 of Exhibit 78?

5 MR. FREIDIN: What paragraph?

6 MR. CASTRILLI: Paragraph 8.

7 MR. FREIDIN: Panel 3?

8 MR. CASTRILLI: Yes.

9 DR. OSBORN: No, it doesn't contradict
10 that at all, Mr. Castrilli.

11 MR. CASTRILLI: Q. Well, the sentence
12 reads:

13 "MNR strives to provide a continuous
14 and predictable supply of wood to the
15 forest products industry by practicing
16 sustained yield management on a
17 management unit basis."

18 DR. OSBORN: A. Yes, and I stand by that
19 statement.

20 Q. And you don't think that the
21 scenarios you have produced for Panel 4 provide an
22 inherent contradiction to that statement?

23 A. No, they neither contradict nor do
24 they sustain that particular comment and I fully
25 explained as to what the simulation exercise was about

1 and what it was intended to do.

2 Q. And your testimony is the five
3 scenarios fit MNR's definition of sustained yield
4 management at the management unit level?

5 A. No, they were not done at the
6 management unit level.

7 Q. If they were done at the management
8 unit level?

9 A. We are using the production policy
10 model which is a simulation without MAD control.

11 Q. Your answer is -- planes. Hold on a
12 moment so you can be heard.

13 THE CHAIRMAN: The train is late, Mr.
14 Castrilli, so they sent a plane.

15 MR. CASTRILLI: Is that Ms. Blastorah
16 flying by to contribute her views?

17 MR. CAMPBELL: Mr. Chairman, I used to
18 get accused in Hydro hearings when the lights went out
19 of arranging it at critical moments. I think the
20 train -- well, perhaps the plane, but not the train.

21 THE CHAIRMAN: You probably did, Mr.
22 Campbell. Sorry, go ahead.

23 DR. OSBORN: I have got a question in
24 pieces, Mr. Chairman, and I have lost personally track
25 of the pieces.

1 MR. CASTRILLI: Q. My question was: Is
2 your testimony the five scenarios fit MNR's definition
3 of sustained yield management at the management unit
4 level?

5 DR. OSBORN: A. And the answer was no.

6 Q. Let me ask you: Are the rotation
7 ages for natural regeneration, which is the new forest,
8 Roman numeral I, used in the OWOSFOP for Production
9 Policy different from the ones in management plans?

10 A. I hesitate because I am not sure
11 there is a management plan yet written that
12 categorically separates the new forest. First of all,
13 I am not sure there is a management plan yet written
14 that separates the rotation for old forest, new forest.
15 That is the first comment.

16 Second, within the new forest, I am quite
17 convinced there is not a management plan written that
18 separates the rotation for different levels of
19 silvicultural intensity in the new forest.

20 So, given that statement, I cannot really
21 compare with: Does the 150 years that is inherent in
22 the model compare with any existing MAD calculation.
23 The 150, just to add to that, in fact is longer than
24 that which is typically taken as a rotation age in any
25 management plan with which I am familiar.

1 THE CHAIRMAN: Would that make the model
2 more conservative?

3 DR. OSBORN: Not really, Mr. Chairman,
4 because the MAD calculation per se and the rotation
5 age, therefore, which is associated with that
6 calculation really don't enter into the model at all.
7 They are there as an education device, they have no
8 impact on control. The only reason the rotation is in
9 there is to calculate that value for educational
10 purposes.

11 MR. CASTRILLI: Q. Sorry, can we
12 continue?

13 Dr. Osborn, turning to the issue of
14 meeting projected demands. And I understand that your
15 testimony has been that sustaining the new forest to
16 meet projected demands may require increased resource
17 commitments so that a new forest of sufficient
18 magnitude can be established.

19 Is that a fair statement?

20 A. Yes.

21 Q. Do you agree that rather than trying
22 to meet the projected demands of what the industry may
23 need, isn't the issue that MNR should be addressing in
24 this Environmental Assessment what amount of wood do we
25 want to supply to mills and what amount of wood type

1 can we afford to produce economically, socially and
2 environmentally?

3 A. Oh, I agree with all those things.

4 Q. Can you confirm that that issue is
5 not dealt with in your models?

6 A. And I pointed out in no uncertain
7 terms the model was a first approximation of some of
8 those items. The model could be expanded to try and
9 look at some of those issues and, in fact, if you take
10 it to the management unit level you will bring some of
11 those issues in, yes.

12 This was very much a first time, very
13 simplistic approach to looking at what we had in the
14 forest and what may happen to it over time. No shadow
15 of doubt about that.

16 And so some of the issues Mr. Castrilli
17 speaks to could be spoken to in some aspects of
18 modeling, no doubt. Very complicated and other people
19 have tried, you get a whole host of other expertise, on
20 how to calibrate some of the issues Mr. Castrilli has
21 alluded to.

22 Q. In any event, not in the models --

23 A. Not in what we have described in the
24 evidence in Panel 4.

25 Q. Can you also advise me, or advise the

1 Board whether your simulations take into account the
2 negative impact on forest growth from air pollution?

3 A. This was an interrogatory we were
4 asked - it may or may not have been by you - but
5 certainly to do -- actually the question was relating
6 to acid rain, per se, rather than air pollution and the
7 answer we provided then was: No, neither did it take
8 into effect the greenhouse effect which would speed up
9 growth rates.

10 So neither of those two factors about
11 which there is a great deal of speculation and
12 uncertain science was spoken to in the model.

13 Q. If forest growth is declining due to
14 air pollution, would you agree this would have an
15 adverse impact on the sustained yield in future?

16 A. It would reduce the total amount of
17 wood that was available over periods of time. That
18 goes without saying, if the growth rate slows down.

19 Q. Can you confirm for me that so far in
20 this hearing the Ministry of Natural Resources has
21 presented four ways of determining -- at least four
22 ways of determining the amount of wood to be supplied
23 by Ontario's Crown forests.

24 First, the MAD calculations at the
25 management unit level. Is that one of them?

1 A. With a proviso that you haven't
2 spoken to, it's done on a forest unit basis within the
3 management unit, so...

4 Q. Well, the answer to my question is
5 yes, with that proviso?

6 A. With that proviso.

7 Q. Secondly, the matching of mill
8 demands with management unit allowable cuts, that is
9 from Panel 3 as well?

10 A. You are talking about the evidence
11 that Mr. Armson described?

12 Q. Yes.

13 A. Yes, that was spoken to, as to how
14 the MAD was -- how the supply from the unit was
15 organized in that fashion.

16 Q. Thirdly, we have the Cabinet target
17 of 1972 arising from the Forest Production Policy and
18 perhaps to be revised further by a new Forest
19 Production Policy?

20 A. And you are citing that as an example
21 of how we regulate the forest, sir?

22 Q. A third way of determining the amount
23 of wood to be supplied?

24 A. Oh, okay. Yes, I'll buy that.

25 Q. Fourthly, we have the simulation

1 scenarios of the OWOSFOP Production Policy; is that
2 right?

3 A. Yes, that is another way of looking
4 at the total issue.

5 Q. Now, fifthly we have one that wasn't
6 proposed by the Ministry but does appear to exist in
7 some form, two trees for one; is that right?

8 A. If you want to put that down as the
9 fifth item, I personally dismiss that one.

10 Q. Well, that's nice to know. Which
11 particular path is the Ministry of Natural Resources
12 following?

13 MR. FREIDIN: Mr. Chairman, I would like
14 to respond to this line of questioning. In my
15 respectful submission we are not here to determine how
16 the province, the Ministry or anybody should go about
17 determining the amount of wood which should be supplied
18 to industry; we are here to determine the effects of
19 the activities comprised in the undertaking, what they
20 have on the environment.

21 The position of the Ministry of Natural
22 Resources is that its objective is to supply wood to
23 the forest products industry in this province, subject
24 to the application of yield regulation as has been
25 described by Panel 3 and perhaps commented on as asides

1 in other panels.

2 Therefore, I would submit the question as
3 to which of the four or five ways of determining the
4 amount of wood which would be supplied to industry is
5 irrelevant or is improper because it is dealing with an
6 irrelevant subject matter which is not before the
7 Board.

8 THE CHAIRMAN: Yes. But, Mr. Freidin,
9 surely your client brought in all of the evidence
10 before the Board on almost all of those things referred
11 to by Mr. Castrilli in terms of direct evidence. You
12 laid the model before us, you talked about the Cabinet
13 target 1972 of 9.1-million and you went through the
14 simulation model. I mean all of those things were
15 brought before the Board through your own panels.

16 MR. FREIDIN: I accept that observation,
17 however, it is the purpose for which that evidence was
18 led. The evidence was led in relation to those matters
19 because they have some role to play in terms of the
20 actual management of the forest; they were not led as
21 an indication that there were four or five different
22 ways of going about how to determine the question: How
23 much wood should be supplied.

24 For instance, the simulation which was
25 dealt with by this panel was not led for the purposes

1 of indicating how much wood should be supplied. How
2 much wood should be supplied is determined by the
3 demand at management unit levels, and how much will be
4 supplied is constrained -- how much is on those
5 management units, singly or collectively, to provide to
6 industry.

7 I mean, I think that all of these factors
8 were raised by the witnesses for the Ministry of
9 Natural Resources, but not in relation to, or for the
10 purpose of dealing with an issue which, in my
11 submission, is irrelevant to these proceedings.

12 THE CHAIRMAN: Mr. Castrilli?

13 MR. CAMPBELL: Just...

14 MR. CASTRILLI: Mr. Chairman, I
15 understand Mr. Campbell would like to respond to that

16 THE CHAIRMAN: Mr. Campbell?

17 MR. CAMPBELL: Mr. Chairman, I just think
18 this is an issue that goes far beyond the objection to
19 the question by the nature of the objection.

20 If I turn to the Environmental Assessment
21 Document, I find that the purpose of the undertaking is
22 to provide a continuous and predictable supply of wood
23 for Ontario's forest products industry. Now, Mr.
24 Freidin has made it quite clear on previous occasions
25 that taking that purpose - it's got to be read in the

1 context of doing so in an environmentally acceptable
2 manner.

3 I, on behalf of my client, cannot accept
4 the position that matters of the requirements for wood
5 are irrelevant. It is precisely meeting this purpose
6 that will cause or not cause environmental impacts
7 precisely. And if -- if, for instance - I am not
8 suggesting that this is in fact the case, but I put it
9 as a hypothetical - if the demand was set at a figure
10 which was too high, the consequences of that could be
11 pressure to supply wood to meet that purpose which
12 would put a great deal more pressure on carrying out
13 the activity in a way that becomes detrimental to the
14 environment.

15 There is no question that impact on the
16 environment is a judgmental matter. And if there is a
17 very high demand for wood and a relatively low amount
18 of wood out there - again, I don't suggest that is the
19 case - but if he did put that scenario forward, then in
20 exercising that judgment, one factor that is going to
21 be taken into account is: We need a lot of wood to
22 keep this important industry in Ontario functioning.
23 It is going to be a factor in peoples' considerations.

24 And, in my submission, Mr. Castrilli's
25 question is not only proper but I think that the

1 objection, if sustained, goes to the very heart of
2 whether we are going to be in a position to deal with
3 potential environmental impacts associated with meeting
4 the demands for wood to the industry in this province,
5 a goal which, I submit, everyone in this room wants to
6 see happen, subject to perhaps, perhaps some debate
7 about the environmental impact and methods of doing so.

8 Now, I just see this matter as being
9 fundamentally important, Mr. Chairman.

10 THE CHAIRMAN: Do you want to respond to
11 that, Mr. Freidin?

12 MR. FREIDIN: Yes, I would like to.

13 As I understand the submission of Mr.
14 Campbell, the nub of it is really in the hypothetical.
15 He is afraid that supply is so large somehow, I guess
16 what happens out in the field, may be done in an
17 environmentally unsound way, people are going to start
18 cutting corners and doing things that perhaps they
19 wouldn't do if the demand wasn't so great.

20 But the purpose of the hearing -- one of
21 the purposes of the hearing is to ensure that practices
22 in the field do not occur in environmentally unsound
23 ways. The Ministry commits itself to practising
24 sustained yield as defined.

25 THE CHAIRMAN: But how can this be

1 divorced from demand and supply? How can the practices
2 in the field not be influenced or affected by supply
3 and demand?

4 MR. FREIDIN: They are, I would submit to
5 you, that in terms of activities made to supply the
6 demand, there won't be any activities in the forest to
7 supply the required demand if yield regulation
8 indicates that you cannot actually harvest.

9 So that will --

10 THE CHAIRMAN: Well, just a moment. Just
11 as an example, you may well have to, for instance,
12 construct more roads as an activity to accelerate a
13 harvest in a particular area to meet a particular
14 demands; would you not?

15 I mean, would not the activity of
16 building roads or accessing the forest not, to some
17 extent, depend, in some scenarios, on the demand level
18 at that particular point in time, and would not the
19 activity of building the roads, as an example, have
20 some environmental impact, either positive or negative,
21 that should be looked at as part of the Environmental
22 Assessment?

23 MR. FREIDIN: Well, of course that
24 activity will have an impact, and that is the very sort
25 of thing that the Board, in my submission, should be

1 looking at. We are going to be describe the
2 activities, all of them put forth and how they might
3 potentially affect the environment, how the Ministry
4 goes about mitigating those effects.

5 It is quite proper for the Board to
6 consider that evidence and if you believe that the
7 evidence does not indicate that some particular method
8 or some particular way a certain activity is carried
9 out in the bush just is always unacceptable from an
10 environmental point of view, you impose a term or
11 condition.

12 The Ministry is putting forward a
13 planning process that is going to tell the Board how
14 the Ministry goes about planning for all of these
15 activities and how it goes about protecting the
16 environment from improper practices, in fact, it comes
17 before the Board and says: We have a monitoring system
18 to make sure that plans get carried out in accordance
19 with approved plans.

20 So if at the end of this whole piece,
21 this whole Environmental Assessment the Board has heard
22 about how the activities are carried out, how they
23 consider other uses and values and how, in the
24 Ministry's mind, those other uses are properly
25 accommodated and dealt with, then the Ministry should

1 receive the approval subject to the commitment or the
2 number of commitments that are being made in this
3 Environmental Assessment such as the monitoring program
4 which is yet to be described, subject to following the
5 planning process but which is yet to be described.

6 So, I get the sense, Mr. Chairman, that
7 some -- that perhaps some people, and perhaps you are
8 concerned that my submissions are somehow going to make
9 a consideration of these activities in the bush and
10 what effects they really do have on the environment is
11 not going to be canvassed as a result of my submission.

12 And I am saying...

13 MR. CAMPBELL: Mr. Chairman. That
14 wasn't -- with respect, that is an absolute and
15 fundamental misstatement of what all the submissions,
16 and mine in particular, were on this point. I think
17 Mr. Freidin, if he wants to deal with our submissions
18 fine, don't make up submissions for me.

19 MR. FREIDIN: I am responding to the
20 Chairman's comment to me, Mr. Campbell, I would
21 appreciate it if you wouldn't interrupt.

22 Those are my submissions.

23 THE CHAIRMAN: Well, okay. Are you going
24 to respond to Mr. Campbell's submissions particularly?

25 MR. FREIDIN: Well, I think if I do and I

1 can repeat myself. I understand him to say that people
2 are going to cut corners, or somehow things won't be
3 done environmentally sound if the supply of the demand,
4 which is going to be supplied, is too large.

5 And I am saying to this Board whether or
6 not that happens will depend on whether in fact the
7 Ministry carries out its operations in the manner that
8 it will describe to the Board that it does carry them
9 out, and whether this Board has the power to impose
10 terms and conditions, if it feels it is required, to
11 ensure that these activities occur in an
12 environmentally sound way.

13 I don't see any connection between that
14 task -- any connection between, sort of fulfilling that
15 task and wondering about what the demand really might
16 be. If the Forest Production Policy is to supply 16
17 times what the forest can possibly produce, and you
18 would have to go out there and cut everything down -- I
19 am not saying that the Ministry -- or that the Board
20 can't say that is inconsistent with yield regulation,
21 the effects on the environment, if you go out and you
22 actually try to do that, are unacceptable. You can
23 come to that conclusion, you can impose terms or
24 conditions.

25 I want to make sure I am addressing your

1 concern. You said this before that you knew we were
2 going to get to this position some time. I want to
3 make sure you understand the Ministry's position.

4 So if you have got any questions, ask.

5 THE CHAIRMAN: Mr. Campbell, I am not
6 sure, at least in my interpretation of what Mr. Freidin
7 said, that he is responding directly to what your
8 observation was initially. So I wonder, for the
9 assistance of the Board and others, you might try and
10 re-articulate your position, your client's position, on
11 the issue of demand and supply.

12 MR. CAMPBELL: My client's position is
13 that the issue of the total environmental impact of
14 this undertaking simply cannot and, in my submission --
15 in fact cannot and, in my submission, should not be
16 divorced from demand considerations. To suggest that
17 the environmental impact will not vary with the level
18 of demand is, in my submission, a ridiculous
19 proposition.

20 This hearing has to make some
21 determination, not just about the environmental impact
22 on any particular square foot of forest land, it has to
23 make also some conclusion based on the overall impact
24 of carrying out this undertaking over its full and
25 complete area. It cannot do so without having some

1 appreciation for the overall level of demand which is
2 expected to be extracted from that forest.

3 I would point out, Mr. Chairman, that in
4 Mr. Freidin's outline of evidence for this panel the
5 concluding words of that outline of evidence are, that
6 this panel will provide an estimate of demand,
7 something which it has notably not done, and a matter
8 which I was going to raise in my cross-examination.

9 But if you look at the witness outline it
10 states that Panel 4 will provide an estimate, the MNR's
11 most current estimate -- I don't have the words right
12 in front of me, I could get them. I think it is
13 irrelevant to the point of what the demand will be.

14 This matter is essential for
15 environmental considerations and it has been put in
16 issue by Mr. Freidin in his own witness statement.

17 THE CHAIRMAN: Mr. Tuer?

18 MR. TUER: First I have no objection to
19 the question that has been posed to the witness panel.
20 Secondly, with respect to the issue raised by counsel
21 for MOE, I am not prepared to address argument to that
22 question at this time.

23 It has been put at a reasonably
24 fundamental level and if it is going to be argued, then
25 I want to have formal notice of it and be given the

1 opportunity to give it some consideration.

2 THE CHAIRMAN: Well, certainly -- thank
3 you, Mr. Tuer. Certainly, Mr. Castrilli and Mr.
4 Campbell and Mr. Freidin, I think the issue is an
5 important one, it certainly is far reaching in its
6 impact should we rule this consideration of demand
7 irrelevant to the proceedings at hand and I think, in
8 fairness to the Board, to the parties, to counsel,
9 certainly we need an opportunity to reflect on the
10 submissions made, but I think that each of the parties
11 should give it some further consideration and maybe it
12 is an issue, as you suggest Mr. Tuer, that should be
13 formally argued to the point where we can make a
14 determination based on our best judgment as to whether
15 or not and issue of this magnitude is or is not
16 included within the corners of this undertaking.

17 MR. TUER: Well, to begin with, Mr.
18 Chairman, I may be totally misunderstanding, but as I
19 listen I am not sure that the same question is being
20 articulated on each side of the table. I am not sure
21 what the issue is that's being argued, because it's
22 being articulated differently by Mr. Campbell and Mr.
23 Freidin.

24 THE CHAIRMAN: Well --

25 MR. TUER: That's why I suggest, Mr.

1 Chairman --

2 THE CHAIRMAN: We may have it totally
3 misrepresented in the Board's mind, but as I understand
4 it - and I want to state this very sort of simply, and
5 by no means is this meant to state each of your
6 positions in any comprehensive way - but as I
7 understand it, Mr. Freidin, your position is basically
8 that the mandate of this Board, under the Environmental
9 Assessment Act and pursuant to the particular
10 undertaking before us, is to look at the activities
11 proposed and their environmental impacts resulting from
12 those activities and at the end of the day decide that
13 with the planning process put into place, as well as
14 the safeguards or whatever you want to call them, such
15 as monitoring and yield regulation and all of these
16 other things, those activities, if carried out in that
17 manner and subject to whatever conditions the Board may
18 wish to impose, is acceptable from the environmental
19 point of view in accordance with the provisions of the
20 Act.

21 And that is basically what I got to be
22 your sort of bottom line position as contrasted to Mr.
23 Campbell's position which was basically, not only do we
24 look at the impacts from the various activities, but we
25 have to look at the totality of the - I wouldn't say

1 strains - but the potential impacts on the environment
2 which include the overall demand picture as well.

3 MR. FREIDIN: I think you have my -- I
4 think you state it correctly and certainly that does
5 not mean the Board is not supposed to hear evidence
6 about demand, it does not mean that the Board shouldn't
7 be interested in whether the demand is increasing, it
8 does not mean that it is irrelevant for the Board to
9 know that there are economic benefits as a result of
10 supplying the wood. Those are economic impacts.

11 So I am not saying that you can't hear
12 evidence about demand, demand is an important piece of
13 the evidence. The benefits which are created as a
14 result of supplying that demand is a relevant
15 consideration. That's why I say, it's the purpose for
16 which you are hearing demand.

17 My objection to the question wasn't
18 because it was about demand, it was, in my respectful
19 submission, the question and the answer is only
20 relevant if to be put to the use that I have indicated
21 in my submissions is really beyond something which is
22 not before the Board and that is to determine an
23 appropriate level.

24 THE CHAIRMAN: I know, but how can we
25 determine some of these other things if we have not got

1 an idea of what the prospective or potential demand may
2 or may not be as the benchmark within which to weigh
3 the possible impacts of some of these various
4 activities?

5 MR. CASTRILLI: Mr. Chairman, I'm
6 wondering -- it was my question which sparked all of
7 this. In the interests of saving my question and
8 actually getting an answer to it, I would like to
9 contribute to the submissions, perhaps to give a
10 perspective of why I asked the question I did.

11 It is my position -- the position of my
12 clients that inevitably the level of wood to be
13 supplied affects the type of environmental constraints
14 that may be put on the various aspects that my friend
15 Mr. Freidin is seeking approval for; whether it be
16 cutting, whether it be tending, whether it be
17 regeneration, or the fourth aspect which, for the
18 moment, escapes me.

19 What are the potential environmental
20 constraints that can be put on those four activities
21 and which will be seen to be appropriate, certainly is
22 going to be affected by the level of demand the
23 Ministry believes it is trying to meet or expects to
24 meet.

25 And, quite frankly, I would be very

1 surprised if my friend Mr. Freidin did not argue in
2 final argument some "x" years from now for lesser
3 constraints of the type that my clients might otherwise
4 be pursuing because the level of demand expected to be
5 met or the needs to be supplied.

6 So the two are inevitably tied together
7 and you can not deal with the issue of what types of
8 environmental constraints are appropriate if you do not
9 know what kind of level and supply and demand the
10 Ministry is trying to meet.

11 That was the purpose of the question.

12 THE CHAIRMAN: Counsel, the Board has
13 heard the representations of those who have made them
14 to this point.

15 Mr. Tuer, are you going to be in a
16 position, or do you want to address this issue further?

17 MR. TUER: Yes, I do, Mr. Chairman. I
18 will do it tomorrow.

19 THE CHAIRMAN: All right.

20 Can we then reserve on this particular
21 question until after you have had an opportunity to
22 address it tomorrow morning, I suppose, because this
23 will obviously form part of your cross-examination,
24 should we rule in favour of the question being allowed.

25 And we have Mr. Edwards coming tomorrow

1 as well, we have been advised and he is going to take
2 two to three hours. So it may likely be that this
3 cross-examination will not finish tomorrow, bearing in
4 mind that Mr. Campbell still has to cross-examine as
5 well.

6 So I think the order of affairs should
7 probably be that if you would consider this overnight,
8 Mr. Tuer, and the other parties can consider their
9 positions, perhaps we can take a short period of time
10 first thing and just deal with this question and then
11 go on with Mr. Edwards, if you don't mind, Mr.
12 Castrilli, and then come back to you at whatever time
13 remaining there is.

14 MR. CASTRILLI: Mr. Chairman, I should
15 note that I was very close to the end of my
16 cross-examination when this matter arose.

17 THE CHAIRMAN: How much more time would
18 you be taking to complete your cross-examination,
19 exclusive of this question?

20 MR. CASTRILLI: Ten minutes.

21 THE CHAIRMAN: Okay. Well, let's finish
22 off your remaining cross-examination, reserving of
23 course your right on this question until after a ruling
24 tomorrow.

25 MR. CASTRILLI: Well, having said ten

1 minutes, maybe I should think about that. Would it
2 perhaps not be appropriate to break now and let me
3 contemplate this overnight.

4 In any event, I don't think it is going
5 to be much more than a half hour.

6 THE CHAIRMAN: Okay. Well, I am sure we
7 can accommodate your cross-examination of a half hour
8 tomorrow along with Mr. Edwards and deal with the
9 motion.

10 We may not get to you tomorrow.

11 MR. CAMPBELL: It breaks my heart, Mr.
12 Chairman.

13 THE CHAIRMAN: Okay.

14 MR. CASTRILLI: Thank you, Mr. Chairman.

15 THE CHAIRMAN: Thank you. We will
16 adjourn until 8:30 tomorrow morning.

17 ---Whereupon the hearing adjourned at 4:50 p.m., to be
18 reconvened on Thursday, August the 18th, 1988,
commencing at 8:30 a.m.

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